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CAPACITY-BUILDING

CAPACITY-BUILDING IN DEVELOPING COUNTRIES (NON-ANNEX I PARTIES)

Compilation and synthesis of information on capacity-building needs and priorities of developing countries (non-Annex I Parties)

Note by the secretariat

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Annex

Summary table of information on capacity-building needs of non-Annex I Parties 21

I. MANDATE

1. The Conference of the Parties, by its decision 10/CP.5,[1] requested the secretariat:

(a) To compile information contained in initial national communications of non-Annex I Parties relating to capacity-building activities, programmes and needs, and to make it available in both printed and electronic formats prior to the twelfth session of the subsidiary bodies;

(b) To compile information contained in national communications of Annex II Parties on activities and programmes implemented to facilitate capacity-building in developing countries relevant to the implementation of the Convention;

(c) To further elaborate the specific capacity-building needs and priorities of non-Annex I Parties, taking fully into account the list provided by those Parties and contained in the annex to decision10/CP.5 and the results of the inter-sessional workshops, including workshops on the consultative process for technology transfer, held prior to the twelfth sessions of the subsidiary bodies.

II. SCOPE OF THE NOTE

2. This note is based on the following sources of information:

(c) Initial national communications of the following 23 non-Annex I Parties submitted prior to 1 March 2000: Argentina (ARG), Armenia (ARM), Chile (CHL), the Cook Islands (COK), Egypt (EGY), Georgia (GEO), Indonesia (IDN), Jordan (JOR), Kazakhstan (KAZ), Kiribati (KIR), the Republic of Korea (ROK), Lebanon (LBN), Mauritius (MUS), Mexico (MEX), the Federated States of Micronesia (FSM), Nauru (NRU), Samoa (WSM), Senegal (SEN), Tuvalu (TUV), Uruguay (URY), Uzbekistan (UZB), Vanuatu (VUT) and Zimbabwe (ZWE);

(d) Submissions of the following five non-Annex I Parties: Bolivia (BOL), Brazil (BRA), Samoa (on behalf of the Alliance of Small Island States (AOSIS), Sri Lanka (LKA) and Uzbekistan, as contained in document FCCC/SB/2000/INF.6;

(e) The results of inter-sessional workshops, of which only the three regional workshops on the consultative process for technology transfer held in Africa, Asia and the Pacific, and Latin America and the Caribbean are relevant to this document.[2]

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[1] For the full texts of decisions adopted by the conference of the Parties at its fifth session, see document FCCC/CP/1999/6/Add.1.

[2] The Africa workshop was held on16-18 August 1999 in Arusha, United Republic of Tanzania; the Asia and the Pacific workshop on 17-19 January in Cebu, the Philippines; and the Latin America and the Caribbean workshop on 29-31 March 2000, in San Salvador, El Salvador.

3. Section III of this note outlines the approach used in compiling the information. Section IV presents a synthesis of the compiled information. Section V briefly summarizes the capacity-building activities reported in the initial national communications and the submissions. Section VI presents conclusions based on the synthesized information.

III. APPROACH TO THE COMPILATION AND SYNTHESIS

4. In compiling and synthesizing the information, the secretariat took note of the term "capacity-building" as defined in Agenda 21: "Capacity-building encompasses the country's human, scientific, technological, organizational, institutional and resource capabilities. A fundamental goal of capacity-building is to enhance the ability to evaluate and address the crucial questions related to policy choices and modes of implementation among development options, based on an understanding of environmental potentials and limits and of needs as perceived by the people of the country concerned."[3]

5. Further, the secretariat took note of the provisions relating to capacity-building for developing countries contained in decisions 10/CP.2, 11/CP.2, 9/CP.3, 2/CP.4, 4/CP.4, 5/CP.4, 6/CP.4, 7/CP.4, 12/CP.4 and 14/CP.4, as recalled by decision 10/CP.5.

A. Information from initial national communications

6. The guidelines for the preparation of initial communications by non-Annex I Parties contained in decision 10/CP.2 (FCCC/CP/1996/15/Add.1) do not specifically request information on capacity-building needs and priorities. Instead, the guidelines provide that non-Annex I Parties "may describe the financial and technological needs and constraints" associated with (i) the communication of information and further improvement of national communications, including reduction of the margin of uncertainty in emission and removal variables through appropriate institution and capacity-building; (ii) activities and measures envisaged under the Convention; (iii) measures to facilitate adequate adaptation to climate change; and (iv) needs relating to the assessment of national, regional and/or subregional vulnerability to climate change, which may include, where appropriate, information related to data-gathering systems to measure climate change effects or to strengthen such systems; and identification of a near-term research and development agenda to understand sensitivity to climate change.

7. All of the reporting non-Annex I Parties included information on their financial and technological needs and constraints in their initial national communications, although some did so more systematically than others. For the purposes of this note, information relevant to

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[3] Report of the United Nations Conference on Environment and Development, Vol. I, Agenda 21, Chapter 37 (A/CONF.151/26/Rev.1).

capacity-building was derived from the financial and technological needs and constraints expressed by non-Annex I Parties in their initial national communications.

8. Some non-Annex I Parties, particularly those from the Pacific island States (COK, FSM, NRU, TUV, VUT, WSM), reported specific capacity-building needs and priorities in their initial national communications. In these cases, the process of compiling and synthesizing information relevant to capacity-building was relatively straightforward.

9. Furthermore, in accordance with Article 12.4, some non-Annex I Parties included information on projects[4] proposed for financing. All of the proposed projects implied capacity-building needs, some of which may have been identified in this note.

B. Information from submissions of non-Annex I Parties

10. Information submitted by the non-Annex I Parties to elaborate their capacity-building needs and priorities was focused and generally built upon the list of needs in the annex to decision 10/CP.5.

11. Due to the limited number of non-Annex I Parties which provided information, the capacity-building needs and priorities identified in this note can not be considered exhaustive.

IV. SYNTHESIS OF COMPILED INFORMATION

12. Following the approach described above, capacity-building needs of the reporting non-Annex I Parties were identified in the following areas. Some of the needs listed in the annex to decision 10/CP.5 such as coordination and cooperation, improved decision-making and institutional capacity-building, cut across many of the areas.

(a) UNFCCC and Kyoto Protocol processes

(b) National communications[5]

(c) Greenhouse gas (GHG) inventory

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[4] Paragraph 17 of the annex to decision 10/CP.2 provides that non-Annex I Parties "may, in accordance with Article 12.4, on a voluntary basis, propose projects for financing, including specific technologies, materials, equipment, techniques or practices that would be needed to implement such projects, along with, if possible, an estimate of all incremental costs, of the reductions of emissions and increments of removals of greenhouse gases, as well as an estimate of the consequent benefits."

[5] Initial national communications should include information on national circumstances, the GHG inventory and a general description of steps taken or envisaged to implement the Convention (decision 10/CP.2). However, for the purposes of this note, some areas related to national communications are treated separately (i.e., GHG inventory, vulnerability and adaptation assessment, abatement options analysis, research and systematic observation and public awareness).

(d) Vulnerability and adaptation assessment

(e) Abatement options

(f) Research and systematic observation

(g) Public awareness

(h) Development and transfer of technology

(i) Clean development mechanism (CDM.)

13. In each of the areas mentioned above, the specific capacity-building needs of the reporting non-Annex I Parties relate to the building, strengthening, enhancement and improvement of some or all of the following:

(a) *Institutions*, which include national authorities designated to coordinate climate change activities, public and private institutions, academic, technical and research institutions, non-governmental organizations (NGOs) and communities as well as regional institutions;

(b) *Human resources*, which include staff and experts in public and private institutions, and the development of knowledge, skills and expertise in various disciplines related to climate change;

(c) *Methodology*, which include systematic methods, approaches and practices in various areas;

(d) *Technology and equipment*, which relate to databases, communication, information management, analytical models, monitoring, testing, mapping and geographic information systems, including hardware, software, and know-how;

(e) *Information and networking*, which include information and communication technologies (hardware and software), programmes and networks to effectively facilitate the flow and exchange of information, experience and resources.

14. The succeeding subsections summarize the needs of the reporting non-Annex I Parties in each of the areas identified in paragraph 10 using the "elements of capacity" listed above. The annex table in this note summarizes this information by Parties. The absence of a Party in any of the cells in the table indicates that no information was provided.

A. General needs related to the UNFCCC and Kyoto Protocol processes

15. Several non-Annex I Parties[6] expressed the need to strengthen their institutions, develop their human resources and benefit from information sharing and networking, so as to enable them to fully implement their commitments under the Convention and the Kyoto Protocol, and to effectively participate in the intergovernmental process. More specifically, these needs include:

(a) Establishment and strengthening of *national institutions* such as national climate change committees and/or technical or expert teams to coordinate climate change activities, including coordination in regional and international climate change activities;

(b) Strengthening of key academic, scientific, technical and research institutions and non-governmental organizations, including their management and administrative structures, for undertaking tasks relating to the implementation of the Convention;

(c) Strengthening, promoting and enhancing of coordination and participation of key stakeholders at the community, local, national and regional levels, including in relevant UNFCCC and Kyoto Protocol processes;

(d) Enhancement of capacity for policy-making and planning, linking science and policy, integrating climate change policies in national development strategies and plans, and institutionalizing integrated social, environmental and development planning;

(e) Enhancement of the analytical capacity of experts, policy- and decision-makers to better link the technical and policy issues related to climate change;

(f) Promotion of academic and professional exchange programmes among Parties (among non-Annex I Parties and between Annex I and non-Annex I Parties);

(g) Provision of fellowships and scholarships to climate change negotiators for specialized training at higher levels, so as to raise their awareness and enhance their knowledge and skills in all issues related to climate change, including their understanding of the provisions of the Convention and the work of its Conference of the Parties and subsidiary bodies;

(h) Expansion of opportunities to organize workshops at the national and regional levels for all stakeholders, including policy- and decision-makers, the private sector, technical experts, NGOs, and local communities to facilitate consensus-building regarding issues relevant to the implementation of the Convention;

(i) Establishment of national or regional clearinghouses for information sharing and networking on climate change issues.

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[6] BOL, BRA, IDN, LKA, WSM on behalf of AOSIS

16. In addition, Samoa stated that AOSIS member States need to strengthen and increase the staff of their national delegations which participate in the UNFCCC and Kyoto Protocol processes. At the country level, AOSIS member States "need to build up a pool from which to recruit future experts", including "a need for temporary expertise while staff is away on training programs".

B. General needs related to national communications

17. Many non-Annex I Parties reported difficulties and constraints associated with the preparation of their initial national communications. These include limited financial resources, lack of well-defined national strategies and policies, lack of a national coordination framework, lack of equipment, facilities, expertise and data, and difficulty in accessing information from relevant sources.

18. Some non-Annex I Parties requested assistance, including institutional and technical training, to identify projects, carry out specific studies, and define, develop and implement national climate change action plans as part of the preparation of national communications. Some Parties also indicated the need to maintain and enhance national institutional and technical capacities for future national communications.

19. The Pacific island countries are particularly concerned about significant costs associated with the field work required to support some of the national communication activities, such as high travel costs and also the "hidden" costs associated with prolonged stays due to the infrequency of flights or ships travelling between the islands. High travel costs have also constrained the participation of their limited technical personnel in regional and international activities.

C. Needs in carrying out greenhouse gas inventories

20. Most non-Annex I Parties reported difficulties in preparing their GHG inventories. Some of these difficulties were reported earlier (see FCCC/SBI/1999/7.1, FCCC/SBI/1999/INF.7 and FCCC/SBI/1999/INF.10). The specific difficulties and needs include the following:

(a) Improvements in infrastructure, equipment and facility (BRA, CHL, COK, FSM, KIR, LKA, NRU, TUV, VUT, WSM);

(b) Enhancement of local technical capacity and expertise in data collection, analysis, management, maintenance, reporting and dissemination through adequate training (CHL, COK, FSM, KIR, LKA, NRU, TUV, VUT, WSM);

(c) Establishment of reliable and effective GHG inventory database systems (IDN, UZB, WSM, ZWE);

(d) Promotion and cooperation in the development of a climate change data bank on the Internet, with information and emission inventories, and steps taken to implement the Convention (BRA);

(e) Improvement in data quality (accuracy and reliability) in various key socio-economic sectors, especially in the land-use change and forestry sector where data are lacking or highly uncertain (ARG, CHL, COK, FSM, GEO, IDN, KAZ, KIR, MUS, NRU, ROK, SEN, TUV, URY, VUT, WSM, ZWE);

(f) Improvement in GHG emission projections (GEO);

(g) Development of country-specific methodologies to estimate emission factors in relevant sectors to improve IPCC methodology (ARG, ARM, BRA, CHL, COK, FSM, IDN, JOR, KIR, LKA, MEX, NRU, ROK, TUV, URY, UZB, VUT, WSM, ZWE);

(h) Investigation of current and potential carbon sinks of coral reefs and marine ecosystems, which are not considered by the Intergovernmental Panel on Climate Change (IPCC) methodology at present (FSM);

(i) Promotion of national and regional networking and international workshops to exchange information and share experience on inventory preparation (BRA).

21. Some non-Annex I Parties stressed the importance of continuous and sustained collection of data, maintaining a stable national inventory team, and expanding the scope of their original inventories by including other GHGs such as nitrogen oxides (NO_x), carbon monoxide (CO), non-methane volatile organic compounds (NMVOC), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF_6).

22. Egypt expressed the need for (i) modelling GHG emissions in the agricultural sector, especially the estimation of carbon fraction in rice fields; and (ii) a comprehensive study for measuring and monitoring methane emissions from exploitation, transmission and distribution in its petroleum sector.

23. Indonesia implied needs related to the prevention of forest fires through the utilization of early warning systems in areas prone to forest fires, development of an integrated system to manage forest fires, preparation of local communities to fight forest fires and by requiring fire fighting task forces for forest concessionaires.

24. Some Parties (ARG, ARM, CHL, JOR, KAZ, ROK, SEN, URY, ZWE) applied procedures that could be regarded as good practices in order to improve the quality of their data. The IPCC is currently developing guidance on good practices, including uncertainty management, in national GHG inventories, so as to improve their quality. It is expected that capacity-building will be needed to promote and disseminate this guidance.

D. Needs in vulnerability and adaptation assessment[7]

25. Vulnerability and adaptation assessments usually cover a number of key socio-economic sectors, such as water resources, agriculture, forestry, coastal zones, fisheries, human settlements, human health and natural ecosystems. These involve the collection and analysis of climatic, environmental, social and economic data; the application of computer models (e.g., general circulation models (GCMs), impact models), and the interpretation of results. Significant financial, human and technological resources are required to undertake such a complex, inter-disciplinary and research-oriented task.

26. Due to financial and human resources constraints, most non-Annex I Parties reported vulnerability and adaptation assessments only for selected socio-economic sectors (e.g. water resources, agriculture, forestry, fisheries, coastal resources, human settlements, and human health). The assessments were based mostly on the regional climate change scenarios for a doubling of CO_2 generated by the GCMs, the outputs of which were then compared with long-term observed climatic data in some cases. Some non-Annex I Parties (MEX, URY, ZWE) used crop models to assess the impacts on agriculture. Chile used local models, while some other non-Annex I Parties used expert assessments.

27. Most assessments, especially the adaptation component, were preliminary and limited in scope. In general, Parties reported many gaps in data and methodology. In order to improve assessments, it is necessary to strengthen national and regional institutions, build up national and regional expertise through training, improve methodologies for local conditions, expand the scope of assessment to include a full range of key socio-economic sectors specific to countries, and exchange information and share experience through workshops and networking. The specific capacity-building needs include the following:

(a) Enhancement of multi-disciplinary technical expertise (LKA), of expertise in oceanography (COK), and of cooperation and partnerships with international institutions on the application of GCMs (BRA);

(b) Improvement of data collection, analysis, management, maintenance, reporting and dissemination, including upgrading of relevant infrastructure and equipment (hardware and software) (CHL, FSM, WSM);

(c) Improvement of data quality; refinement of existing methodology and development of appropriate methodologies for local condition (BOL, CHL, KIR); development of regional climate models for the Nile basin and linkage of climate models to hydrological

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[7] Paragraph 15 of the annex to decision 10/CP.2, requests non-Annex I Parties to provide information on "policy options for adequate monitoring systems and response strategies for climate change impacts on terrestrial and marine ecosystems" and "policy frameworks for implementing adaptation measures and response strategies in the context of coastal zone management, disaster preparedness, agriculture, fisheries, and forestry, with a view to integrating climate change impact information, as appropriate, into national planning process". Vulnerability and adaptation assessments contribute to the development and formulation of such information.

models (EGY); application of predictive computer modelling and integrated assessment modelling;

(d) Expansion of the scope of assessments to include other key sectors and important aspects where no or limited work has been done. For example, Chile has identified a number of areas for further work, including (a) the coverage of more crop varieties, changes in planting dates and the feasibility of relocation; (b) evaluation of the impact on protected wildness areas; (c) improved understanding of the impact of water and heat conditions on native forest species and on the advance of desertification and erosion in certain parts of the country. Both Lebanon and the Federated States of Micronesia proposed investigations of salt-water intrusion in coastal areas, while Brazil proposed a study on the vulnerability of human populations who live on arid and semi-arid lands;

(e) Improvement of integrated coastal zone management, including more advanced and sophisticated equipment for monitoring, especially coastal erosion (KIR, LKA, MUS);

(f) Sharing and exchange of information through national, regional and international workshops, access to the Internet (COK);

(g) Development of adaptation options and strategies (BRA, COK, FSM, KIR, LKA, NRU, TUV, VUT, WSM), including determination of appropriate adaptation technologies, particularly in coastal zone management, forestry monitoring system and ocean observing system (LKA), consolidation of endogenous knowledge in order to identify technologies for adaptation (UZB), and development of adaptation project guidelines.

28. The Pacific island countries noted that the training programme in vulnerability and adaptation assessments under the Pacific Islands Climate Change Assistance Programme (PICCAP) has "significantly built the capacity" of the countries. Similar regional training programmes may be needed for other regions.

29. Most non-Annex I Parties elaborated on their needs for further research in order to study their vulnerability more comprehensively. Some proposed projects such as ecological baseline studies under both controlled and field conditions (LBN); improvement of groundwater storage (ZWE), more drought-tolerant and disease-resistant crops and livestock (ARM, MUS, ZWE), evaluation of climate variability and climate change on the movement of tuna and other pelagic fisheries (FSM), climate variability and extreme events, local effects of tectonic processes and sea level change scenarios for small island countries (VUT, WSM), studies on extreme weather events in order to detect changes in the intensity and seasonal and geographical distribution of common weather hazards, such as floods and droughts, with a view to strengthening adaptive capacity (BRA), improved predictions of extreme events to assure preparedness, thus reducing impacts (WSM), better understanding of the linkage between climate change and human health (WSM, TUV), agricultural productivity of different crops and crop varieties, incidence of disease vectors and water supply (VUT), a modelling approach to assess the vulnerability and adaptation of sugar cane to different climate change scenarios (MUS).

30. Some Parties expressed the need to link the findings of preliminary vulnerability and adaptation assessments to the requirements for adaptation (WSM on behalf of AOSIS).

E. Needs in abatement options analysis[8]

31. Some non-Annex I Parties (ARM, CHL, GEO, KAZ, UZB) provided detailed information on their analysis of abatement options in their initial national communications, while others described their abatement options without any analysis.

32. The Federated States of Micronesia identified some constraints in analysing its GHG abatement options, which may be shared by other non-Annex I Parties. These include the lack of detailed, easily-accessible information on renewable energy potential in the country, limited access to new technologies and the limited expertise in the use of those technologies, financial and human costs associated with the acquisition and maintenance of new technologies, dependence of existing energy infrastructure and transportation systems on petroleum consumption; and the need to balance economic development goals - particularly in emerging sectors like tourism.

33. Although the reported abatement options reflect an individual Party's specific needs and priorities (e.g., Zimbabwe expressed the need for improved wood stoves, low mass stoves, coal stoves and bio-gas digester, as well as energy efficiency in small-scale industries), some needs are common to most of the reporting non-Annex I Parties. These include research and abatement options analysis in various key socio-economic sectors (e.g., the development and application of user-friendly analytical tools and integrated assessment methodology), energy efficiency in key socio-economic sectors such as power plants, industry, the residential sector and transport (JOR, KAZ, WSM), renewable resources inventory and computerized database, development and implementation of renewable energy projects (e.g., solar, wind, hydro/mini-hydro, geothermal, biogas, ocean waves), including installation, maintenance, trouble-shooting and repair (GEO, JOR, KAZ, KIR, WSM), sink enhancement (afforestation; reforestation; coral reefs) (FSM, IDN), development of an appropriate regulatory and legislative framework, exchange and sharing of experience, practices and processes regarding emission reductions (BRA).

34. Twelve Parties (ARM, CHL, EGY, FSM, GEO, JOR, KIR, LBN, MUS, UZB, VUT, ZWE) proposed projects for financing, which may imply capacity-building needs.

F. Needs in research and systematic observation

35. All of the reporting non-Annex I Parties included information on their activities related to the implementation of Article 5 of the Convention (research and systematic observation). The needs related to research in GHG inventory, vulnerability and adaptation assessment and the

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[8] Paragraph 15 (e) of the annex to decision 10/CP.2 requests non-Annex I Parties to provide information on programmes containing measures that contribute to addressing climate change and its adverse impacts, including the abatement of increase in GHG emissions and enhancement of removals by sinks.

analysis of abatement options have been mentioned above. Other needs related to research and systematic observation include:

(a) Staff training on the use of satellite monitoring equipment (EGY);

(b) Updating of maps to make them more reliable (FSM);

(c) Collection, review, update, processing and effective dissemination of climatic data (LBN, KIR, ZWE);

(d) Rehabilitation and expansion of the climate station network (LBN);

(e) Climate baseline studies (NRU), including establishment of baseline monitoring stations (CHL, FSM, LKA); climate change and sea level national monitoring centre (KIR);

(f) Establishment of a coral reef monitoring programme to evaluate the degradation of coral reef (bleaching) on a regular basis (EGY, FSM, MUS, WSM); rate of coral growth and sand production and the ability of coral reefs and islands to keep up with sea level rise (TUV);

(g) Research on climate change and sea level rise specific to the country (ARG, KIR, MUS, TUV, VUT, WSM on behalf of AOSIS);

(h) Studies on water resources (KAZ, KIR), including systems to monitor water resources (ARM), and groundwater storage (ZWE);

(i) Monitoring of mountain glaciers (UZB);

(j) Study of extreme events such as tropical cyclones and monsoons (MUS);

(k) Development of early storm surge and early cyclone warnings (COK);

(l) Better understanding of the El Nino Southern Oscillation (ENSO) and modelling of its effects on weather patterns throughout the archipelago (VUT);

(m) Participation in the Global Climate Observing System, Global Terrestrial Observing System, Global Ocean Observing System (EGY); and the application of remote sensing to climate change (EGY);

(n) Promotion of research cooperation between developing and developed countries, and between national and international research organizations (KIR).

G. Needs in public awareness

36. Most non-Annex I Parties reported their initiatives, programmes and activities related to the implementation of Article 6 of the Convention (education, training and public awareness). Some (ARM, EGY, FSM, MUS, NRU) provided extensive information. The public awareness activities reported by some non-Annex I Parties varied from broad information on climate change and its effects to specific issues, such as the benefits of certain mitigation and adaptation options (KAZ, MEX, MUS, SEN, URY, ZWE), energy conservation (JOR, ROK) and natural resources conservation (FSM, JOR, ROK). Although most of the awareness activities reported were oriented towards the general public, some Parties also reported special awareness campaigns targeting specific groups such as local communities (FSM, MUS, ROK, ZWE), government officials (ARM, FSM, ZWE), the industrial sector (ROK, ZWE) and professionals (URY, ZWE).

37. The specific needs identified include the following:

(a) Development and/or strengthening, and implementation of educational, public awareness and outreach programmes targeted at all stakeholders in the public and private sectors, policy- and decision-makers, key socio-economic sectors, educational institutions, NGOs, and communities (FSM, TUV);

(b) Development and production of educational (e.g., school curriculum) and public awareness materials that cover all aspects of climate change and its effects, including policy; legal, scientific (climate change impacts), technical (e.g., specific adaptation and mitigation options) and technological (energy conservation and efficiency; renewable energy; adaptation technologies) information;

(c) Dissemination of information, including research information from the IPCC reports and issues related to the UNFCCC and Kyoto Protocol processes, through various effective means, such as pamphlets, brochures, newsletters, published studies, information kits, educational material, CD-ROM, the Internet (web page), audiovisual material, radio and television programmes;

(d) Consolidation and fostering of public participation in developing and implementing climate change activities (KIR);

(e) Holding of national, regional and international forums to share experience and lessons learned;

(f) Translation of relevant information and publications (e.g. IPCC reports) from English into national languages;

(g) Establishment of a clearing house on data and information related to climate change issues and encouragement of improved agricultural practices through public campaign as well as developing a public information network for agricultural technology (IDN);

(h) Increased use of geographic information systems, including software and advanced training, to create layered resource maps to help planners update and fine-tune their awareness of vulnerabilities on a periodic basis (MUS);

(i) Strengthening of existing awareness programmes that are already being successfully implemented in the country, such as programmes for improving energy efficiency in the production and consumption of electricity and for the rational use of oil and natural gas derivatives (BRA).

H. Needs in the development and transfer of technologies

38. The reporting non-Annex I Parties expressed the general need for the development and transfer of technologies[9] (defined broadly as hardware, software and know-how) to address both their mitigation and adaptation needs. Many non-Annex I Parties also expressed the importance of increasing access to new technologies, adapting foreign technologies to local conditions, strengthening local research institutions, and enhancing national expertise for developing local technologies (BRA, FSM, IDN, WSM).

39. The results of the three regional workshops (see documents FCCC/SBSTA/1999/11, FCCC/SBSTA/2000/INF.2, and FCCC/SBSTA/2000/INF.6) on the consultative process for the transfer of technology provided some insight into the capacity-building needs and priorities of non-Annex I Parties. Based on the results of the workshops, it appears that all regions share similar needs, though with different priorities. For example, many African countries were unable to report on specific technology needs due to a lack of the human and organizational capacities required to conduct adequate technology needs assessments, while several countries in the Asia and the Pacific region have already completed needs assessments and/or compiled a list of technology needs. In Latin America and the Caribbean, some analysis of abatement options has been undertaken, though few detailed abatement and adaptation technology needs assessments have been undertaken. However, the need to build or strengthen the requisite institutional and human capacities, through appropriate information networks, is well recognized in all regions.

40. Unless otherwise specified, the capacity-building needs summarized below from the results of the regional workshops are common to all regions. Some of these needs have been identified in decisions 2/CP.4 and 4/CP.4.

(a) Strengthening of institutional and human (technical) capacities to (i) identify technology needs and undertake country-driven needs assessment, prioritization, planning, monitoring and evaluation; (ii) assess appropriate technologies, including the assessment of existing absorptive capacity; analysis of technology impacts; analysis of anticipatory adaptation technologies and measures to promote their use; (iii) support and manage imported technologies; including technology testing, certification and labelling (Latin America

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[9] See also decision 4/CP.4 (FCCC/CP/1998/16/Add.1).

and the Caribbean); (iv) adapt and develop technologies for local needs, including the use and enhancement of existing endogenous capacities and technologies by involving local experts, institutions and communities; (v) design and implement policy, regulatory and institutional reforms (Latin America and the Caribbean); (vi) analyse constraints and barriers to the transfer of technology; (vii) undertake research and development in the country and the region; (viii) identify and monitor the secondary benefits to mitigation and adaptation related to policies and measures, such as local environmental and health benefits (Latin America and the Caribbean); (ix) protect intellectual property (Latin America and the Caribbean); and (x) help countries formulate, integrate and implement national energy and environmental policies (Africa);

(b) Establishment of a national framework for technology transfer, including the identification of focal points for the transfer of environmentally sound technologies (ESTs), to facilitate stakeholder participation (Latin America and the Caribbean), establishment of technology transfer desks (Africa) or technology units (Latin America and the Caribbean), establishment of an intergovernmental advisory panel (Latin America and the Caribbean);

(c) Strengthening of educational institutions (Africa), management consulting sector, energy service companies, investment product rating and legal service providers (Latin America and the Caribbean);

(d) Enhancement of endogenous capacity and capabilities for technological and socio-economic research and development; enhancement of regional capacity to adapt imported technologies to local conditions; and support for research and development programmes and cooperation within the country and the regions;

(e) Establishment of national and/or regional cleaner production centres and centres for innovation and enterprise development or their equivalents (Africa);

(f) Building of capacity through technology demonstrations and commercial pilot projects (Asia and the Pacific); and establishment of international technology demonstration centres in developing countries (Latin America and the Caribbean);

(g) Greater coordination among, and use of, various existing mechanisms including bilateral assistance, multilateral efforts, regional organizations, the private sector, NGOs, academics and research institutes;

(h) Promotion of an integrated approach to link technology diffusion and transfer, development, energy, the environment and natural resources (Africa);

(i) Strengthening of existing biomass activities, networks and projects (Africa);

(j) Promotion of an enabling environment to remove informational, financial, economical, technical, technological, institutional and political barriers (Asia and the Pacific);

(k) Provision of training programmes targeted at the public and private sectors, including national utilities, the banking and finance sector, NGOs, and the local community. The scope of training may include: technologies or practices which improve productivity and generate incomes, particularly among the rural poor; enterprises which specifically contribute to the transfer of technologies across national borders; projects which allow Africans to take equity partnerships in cleaner production businesses (Africa);

(l) Assistance for the development of partnerships between the private sector and NGOs (e.g. joint ventures) and assistance to NGOs to mobilize action at the societal level (e.g. raise public awareness) (Africa);

(m) Development of regional and south-south technology transfer activities, enhancement or development of research and development (R&D) programmes within developing countries together with complementary policies to promote technology diffusion, combined with enhanced joint international research and development collaboration programmes;

(n) Enhancement of the capacities of existing national and regional organizations and centres to improve access to information (e.g., on the emerging and the best available technologies and processes for mitigation and adaptation) and to facilitate information sharing and networking among all stakeholders, and dissemination of good practices;

(o) Establishment of information centres and clearing houses; establishment of databases of regional needs and projects (Latin America and the Caribbean);

(p) Expansion of the range of available information (e.g. information on the design requirements for good investment projects, performance data, banking and insurance information (Africa).

I. Needs under the clean development mechanism (CDM)

41. In accordance with Article 12 of the Kyoto Protocol, the purpose of the Clean Development Mechanism (CDM) is to assist Parties not included in Annex I in achieving sustainable development and in contributing to the ultimate objective of the Convention, and to assist Parties included in Annex I in achieving compliance with their commitments under Article 3.[10] Several initial national communications submitted after 1998 (CHL, GEO, IDN NRU, TUV, UZB, FSM) and one submission (BRA) contain references to the role of CDM in promoting sustainable development.

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[10] For capacity-building efforts in the CDM, see FCCC/SB/1999/MISC.11, FCCC/SB/1999/4, FCCC/SB/1999/6, FCCC/SBSTA/1999/INF.8 and FCCC/SBSTA/1999/INF.8/Add.1.

42. The capacity-building needs under the CDM are more clearly expressed in the information submitted by non-Annex I Parties contained in document FCCC/SB/2000/INF.6. These include the following:

(a) Development of a national institutional framework to coordinate action for the acceptance, revision and implementation of CDM projects and which will also serve as a link to the executive board of the CDM (CHL);

(b) Elaboration of studies on specific methodological and institutional aspects of the implementation of the CDM, including the kinds of admissible projects, the issue of project additionality, and establishment of project baselines; studies to evaluate national market opportunities for CDM projects, as well as regarding the definition of additional eligibility criteria, according to national strategies for sustainable development (BRA, CHL);

(c) Enhancing or strengthening of technical capacity in the public and private sectors, including national technical focal points and NGOs to identify, formulate, design, implement, monitor and certify potential emission reduction projects, including accurate and dynamic baseline determination in sectors such as industry and forestry, conduct cost-benefit and sustainability analysis, and emission reduction analysis (BRA, LKA, UZB);

(d) Support for countries to consolidate their existing technical and institutional structures for climate change, including the mechanisms under the Kyoto Protocol, in terms of their human resources and institutions (BOL);

(e) Strengthening of the capacity of the private sector to identify, formulate and design emission reduction projects, as well as monitor and certify emission reductions, in particular for those activities that can potentially contribute the most to achieving sustainable development. Such activities may include renewable energy supply, increased energy efficiency, and establishment of forests and reforestation in areas that have been degraded for many years (BRA);

(f) Strengthening of national authorities and experts, and establishment of corresponding national structures for Kyoto Protocol mechanisms, including raising the awareness of issues related to the implementation of Kyoto Protocol mechanisms at the highest political level, including consultations at the ministerial level (UZB);

(g) Establishment of networking facilities for direct and easy linkage between the donor agency or country and the implementation agency (LKA), and dissemination of the information on the mechanism to the government and the various sectors of civil society (BRA).

43. The list in the annex to decision 10/CP.5 also mentions the need for CDM demonstration projects to enhance capacity-building, data acquisition and sharing, and project negotiation skills, among others.

V. CAPACITY-BUILDING ACTIVITIES AND PROGRAMMES REPORTED IN INITIAL NATIONAL COMMUNICATIONS

44. Many non-Annex I Parties reported various multilateral and bilateral activities and programmes relating to the preparation of their initial national communications, including climate change policy formulation, GHG inventory, vulnerability and adaptation assessment, and mitigation analysis. Some of the activities and programmes mentioned are:

(a) Global Environment Facility (GEF) enabling activities;

(b) Pacific Islands Climate Change Assistance Programme;

(c) United Nations Environment Programme (UNEP) Socio-economic Impacts and Policy Responses resulting from Climate Change - Southeast Asia (IDN);

(d) Indonesian Small Island Study (Bali Study) on Impacts of Climate Change and Policy Response Options to Mitigate and Adapt Climate Change (IDN);

(e) UNEP/GEF Country Case Studies on Sources and Sinks of Greenhouse Gases (SEN);

(f) UNEP/GEF Economics of GHG Limitation (IDN, MUS, SEN);

(g) United Nations Development Programme (UNDP)/GEF Building Capacity in Sub-Saharan Africa to Respond to the UNFCCC (ZWE);

(h) CC:TRAIN (ZWE);

(i) UNDP/Asian Development Bank (ADB)/GEF Asia Least-cost Greenhouse Gas Abatement Strategy (ALGAS) project (IDN);

(j) ADB Indonesian Country Study (Climate Change in Asia Regional Study on Global Environment (IDN);

(k) United States Country Studies Programme (CHL, EGY, FSM, IDN, KAZ, KIR, LKA, MEX, MUS, URY, WSM, ZWE);

(l) Response Action Against the Increasing Emissions in Indonesia, 1991-1992 (IDN);

(m) Climate Change and Forestry, Ecoforestry for Terrestrial CO_2 fixation,1992-1993 (IDN);

(n) Feasibility Study on Sustainable Reforestation of Degraded Grassland in Indonesia, 1995-1996 (IDN).

VI. CONCLUSIONS

45. While the capacity-building needs identified in this note are based on information provided in 23 initial national communications and 5 submissions from non-Annex I Parties, representing a total of 26 non-Annex I Parties, it should be recalled that many of the needs identified had been reported earlier (see FCCC/SBI/1999/11, FCCC/SBI/1999/INF.7 and FCCC/SBI/1999/INF.10).

46. As this note suggests, non-Annex I Parties share many capacity-building needs. However, non-Annex I Parties are not homogeneous and have different experiences and situations in terms of implementing the Convention and the Kyoto Protocol. While this note attempts to highlight the common capacity-building needs of non-Annex I Parties, efforts to support capacity-building should take into account the need for country and regional specificity.

47. Many of the reporting non-Annex I Parties noted the positive role of regional institutions and centres of excellence. As indicated in paragraph 1 (e) of decision 10/CP.5, efforts to facilitate capacity-building should consider the role of regional institutions and centres of excellence in capacity-building in non-Annex I Parties.

48. One commonly expressed requirement for capacity-building is the need for continuity and sustainability of capacity-building efforts. Most of the activities that have taken place in reporting non-Annex I Parties have been project-based in nature. Indeed, many of the reported activities and programmes have concluded. The capacities that have been built during the duration of these projects need to be sustained and further developed.

49. Capacity-building in non-Annex I Parties requires a flexible and focused approach based on the objectives and strategies of the Parties themselves to implement the Convention and the Kyoto Protocol. It needs to be responsive to their existing and emerging needs and evolve as capacities are developed to rise to new challenges.

Annex

Summary table of information on capacity-building needs of non-Annex I Parties

	Areas where capacity-building is needed								
Elements in which capacity would need to be built	UNFCCC and Kyoto Protocol processes	National communication (general issues)	GHG inventory	Vulnerability and adaptation assessments	Abatement options analysis	Research and systematic observation	Public awareness	Development and transfer of technologies	CDM
Institutional strengthening	**BOL, BRA, LKA, WSM**	ARG, **BOL**, **BRA**, CHL, COK, EGY, FSM, GEO, KAZ, LBN, **LKA**, MEX, MUS, NRU, SEN, TUV, URY, **UZB**, VUT, **WSM**, ZWE	ARG, **BRA**, CHL, COK, EGY,FSM, KIR, GEO, JOR, LBN, **LKA**,MUS, NRU, SEN, TUV, URY, UZB, VUT,WSM, ZWE	ARG, **BRA**, CHL, COK, GEO, **KAZ**, LBN, MEX, MUS, NRU, SEN, TUV, URY, UZB, VUT, **WSM**, ZWE	ARG, CHL, GEO, JOR, KAZ, LBN, MEX, MUS, NRU, SEN, TUV, URY, UZB, VUT, WSM, ZWE	ARG, **BOL**, CHL, COK, EGY, FSM, GEO, LBN, **LKA**, MUS, NRU, SEN, TUV, URY, **UZB**, WSM, ZWE	ARG, ARM, CHL, COK, FSM, IDN, KIR, SEN, TUV, URY, WSM	ARG, **BRA**, CHL, EGY, IDN, JOR, , **LKA**, SEN, URY, **UZB**, WSM, Africa; Asia and the Pacific; Latin America and the Caribbean	**BOL**, **BRA**, CHL,GEO, IDN, **LKA**, KAZ MUS, NRU, TUV, **UZB**, WSM
Human resource development (policy, planning, socio-economics, scientific, technical)	**BOL, BRA, LKA, WSM**	ARG, ARM, **BOL**, **BRA**, CHL, COK, FSM GEO, KIR, LBN, **LKA**, MEX, MUS, NRU, SEN, TUV, URY, **UZB**, VUT, **WSM**, ZWE	ARG, ARM, **BRA**, CHL, COK, FSM, GEO, IDN, JOR, KAZ, KIR, LBN, **LKA**, MUS, NRU, SEN, TUV, URY, **UZB**,VUT,**WSM**, ZWE	ARG, ARM, **BRA**, CHL, COK, EGY, FSM, GEO, KIR, LBN, **LKA**, MEX, MUS, NRU, SEN, TUV, URY, UZB, VUT, **WSM**, ZWE	ARG, ARM, CHL, EGY, FSM GEO, KIR, LBN, MUS, NRU, SEN, TUV, UZB, **WSM**, ZWE	ARG, ARM, COK, CHL, EGY, GEO, KIR, LBN, **LKA**, MUS, NRU, SEN, TUV, **UZB**, VUT, WSM, ZWE	ARG, ARM, CHL, COK, FSM, IDN, KIR, SEN, TUV, URY, WSM	ARG, ARM, **BRA**, EGY, FSM **LKA**, MUS, MEX, SEN, URY, Africa; Asia and the Pacific; Latin America and the Caribbean	ARG, **BRA**, CHL, GEO, **LKA**, NRU, TUV, **UZB**, WSM

Summary table of information on capacity-building needs of non-Annex I Parties (continued)

	Areas where capacity-building is needed								
Methodology		ARG, BOL, BRA, CHL, FSM MEX, MUS, SEN, URY, UZB, VUT	ARG, ARM, BRA, CHL, COK, FSM, IDN, JOR, KIR, LKA, MEX, MUS, NRU, ROK, TUV, URY, UZB, VUT, WSM, ZWE	ARG, BOL, BRA, CHL, COK, EGY, FSM,KIR, LKA, MEX, MUS, SEN, URY, UZB, VUT	ARG, BRA, MUS, SEN, URY, UZB	BRA, CHL, LKA, MUS, NRU, UZB		BRA, IDN, LKA, MUS, URY,UZB	BRA, CHL
Technology		ARG, CHL, COK, EGY, FSM, GEO, KAZ, LBN, MEX, MUS, NRU, SEN, TUV, URY, UZB, VUT, WSM, ZWE	ARG, CHL, COK, EGY, FSM, GEO, LKA, MEX, MUS, NRU, SEN, TUV, URY, UZB, VUT, WSM, ZWE	ARG, BRA, CHL, COK, EGY, FSM, GEO, KAZ, LBN, LKA, MEX, MUS, NRU, SEN, TUV, URY, UZB, VUT, WSM, ZWE	ARG, BRA, CHL, COK, EGY, FSM, GEO, KAZ, LBN, LKA, MEX, MUS, NRU, SEN, TUV, URY, UZB, VUT, WSM, ZWE	ARG, CHL, COK, EGY, FSM, GEO, KAZ, LBN, MEX, MUS, NRU, SEN, TUV, URY, UZB, VUT, WSM, ZWE		Africa; Asia and the Pacific; Latin America and the Caribbean	BRA, CHL, GEO, LKA, MUS, NRU, TUV, WSM
Information and networking	BOL, BRA, LKA, WSM, IDN	ARG, BRA, CHL, COK, FSM, GEO, LBN, LKA, MEX, MUS, UZB, VUT, WSM, ZWE	ARG, BRA, CHL, FSM GEO, JOR, KIR, LBN, MUS,VUT, UZB, ZWE	ARG, BRA, CHL, COK, FSM, GEO, LBN, MEX, MUS, UZB, VUT, WSM, ZWE	ARG, BRA, GEO, JOR, LBN, MEX, MUS, UZB, VUT, WSM, ZWE	ARG, GEO, LBN, MUS, NRU, UZB, ZWE	ARG, ARM, BRA, CHL, COK, EGY, FSM, GEO, IDN, JOR, MEX, MUS, KAZ, ROK, SEN, TUV, URY, UZB, ZWE	ARG, BRA, GEO, LKA, MUS, UZB; Africa; Asia and the Pacific; Latin America and the Caribbean	ARG, BRA, GEO, LKA, MUS

WSM: on behalf of AOSIS
Parties in bold refer to information derived from submissions; Parties not in bold refer to information derived from national communications.
The absence of a Party's name in any cell indicates that no information was provided.

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Bonn, 12-16 June 2000

CAPACITY-BUILDING

CAPACITY-BUILDING IN COUNTRIES WITH ECONOMIES IN TRANSITION

Compilation and synthesis of information on capacity-building needs and priorities of Parties included in Annex I to the Convention but not included in Annex II

Note by the secretariat

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I. MANDATE

1. By its decision 11/CP.5,[1] the Conference of the Parties (COP) requested the secretariat to compile and synthesize the information submitted by countries with economies in transition[2] (referred to below as EIT Parties) to identify their needs and priorities for capacity-building, for consideration by the subsidiary bodies at their twelfth sessions.

II. SCOPE OF THE NOTE

2. This note draws on submissions received by the secretariat from 11 EIT Parties (out of 13 included in Annex I). These Parties are Bulgaria (BGR), Croatia (HRV), the Czech Republic (CZE), Estonia (EST), Hungary (HUN), Latvia (LVA), Poland (POL), Romania (ROM), the Russian Federation (RUS), Slovenia (SVN), and the Ukraine (UKR). The full texts of the submissions are contained in document FCCC/2000/SBI/INF.7.

3. This note also includes information resulting from the following workshops:

(a) *Workshop on the new UNFCCC reporting guidelines on annual inventories and options to address the challenges of Annex I Parties with economies in transition (EIT) in preparing national GHG inventories* (30 November – 2 December 1999, Geneva) hereinafter referred to as the UNITAR workshop;

(b) *Workshop on methodological approaches, and what actions are necessary under the Convention, relating to the impact of the implementation of response measures, in accordance with Article 4.8 and 4.9 of the Convention, and in the light of matters related to Article 3.14 of the Kyoto Protocol* (13-15 March 2000, Bonn) hereinafter referred to as the Bonn workshop.

4. Section III of this note outlines the approach used in preparing this note. Section IV provides some background information derived from the submissions of the EIT Parties and the results of the workshops mentioned above. This information is presented to help put into context the capacity-building needs and priorities of EIT Parties. Section V synthesizes the information submitted by EIT Parties following the approach provided below. The specific needs and priorities contained in the submissions are summarized and compiled in tables 1 and 2 at the end of this document.

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[1] For the full texts of decisions adopted by the Conference of the Parties at its fifth session see document FCCC/CP/1999/6/Add.1.

[2] Annex I EIT Parties comprise: Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Russian Federation, Slovakia, Slovenia and the Ukraine.

III. APPROACH TO THE COMPILATION AND SYNTHESIS

5. The submissions of EIT Parties provide a wealth of information on their capacity-building needs and priorities as well as suggestions as to how these might be addressed. This note takes the information provided by EIT Parties and synthesizes it into an initial framework for capacity-building in EIT Parties. The initial framework groups the specific needs of EIT Parties into elements through which the priority areas for capacity-building identified by the Parties can be addressed. The initial framework is illustrated and further explained in section IV.

6. This approach was adopted with the aim of contributing to the development of the elements of a draft framework for capacity-building, for consideration by the subsidiary bodies at their thirteenth sessions.

7. It should be noted that the submissions represent a first attempt by EIT Parties to define their capacity-building needs and priorities. For this reason, many of the submissions provide limited and general information about the capacity-building needs of EIT Parties. The initial framework presented below is an attempt to provide a flexible conceptual framework, which could later be expanded and refined as additional capacity-building needs are further identified.

IV. BACKGROUND

8. The general constraints EIT Parties face in implementing the Convention and its Kyoto Protocol were summarized at the workshops mentioned above and affirmed in the submissions. Lack of financial resources was highlighted as a major constraint faced by EIT Parties. In addition, the following capacity-building needs were identified: lack of information on and awareness of climate change issues; lack of regular opportunities to exchange information and views among EIT Parties and with other Parties; limited number of institutions, organizations and experts involved and capable of carrying out the necessary research, analysis, estimates, projections, assessments, studies and verification and monitoring in the area of climate change; and the relatively low priority of climate change as compared to the economic, social and more immediate environmental issues faced by EIT countries.

9. It was also recognized that EIT Parties have capacity-building needs that are different from those of other groups of countries. As Parties included in Annex I, EIT Parties have commitments that impose greater challenges on their existing capacities. The existing capacities in EIT Parties require further development to enable them to implement their commitments under the Convention and its Kyoto Protocol. This implies that capacity-building for EIT Parties "goes far beyond simple training and education".[3]

10. EIT Parties perceive capacity-building not only as a process in which individuals and institutions increase their abilities and competencies to understand and deal with climate change

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[3] Submission of the Russian Federation (FCCC/SB/2000/INF.7).

issues. Mainly, it is viewed as an investment in people, institutions, information and knowledge, and technologies (including the development, adaptation and application of methodologies) that together enable EIT Parties to fulfil their commitments under the Convention and the Kyoto Protocol.

11. Within this general context, the priority areas for capacity-building identified by EIT Parties in their submissions relating to the implementation of the Convention are the following:

- Improving the quality of national greenhouse gas (GHG) inventories;
- Implementing policies and measures to reduce GHG emissions;
- Preparing projections and estimating the effect of policies and measures;
- Impacts assessment and adaptation;
- Research and systematic observation;
- Education, training and public awareness;
- Technology transfer.

12. EIT Parties also indicated another group of priority areas for capacity-building that are critical to their effective participation in the Kyoto Protocol process. These are:

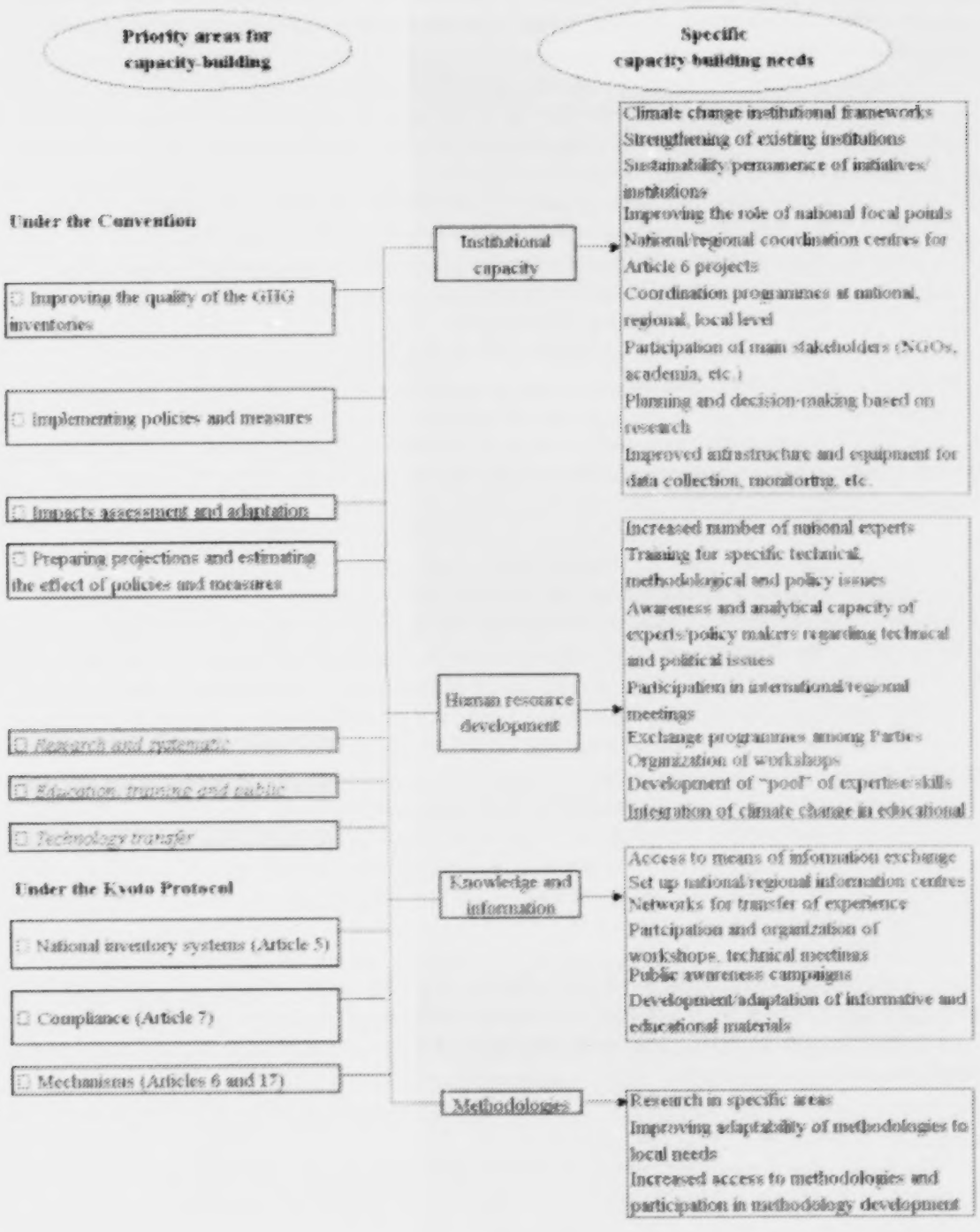
- Establishing national systems for the estimation of GHG emissions (Article 5 of the Kyoto Protocol);
- Preparing supplementary information for the purposes of ensuring compliance with Article 3 of the Kyoto Protocol (Article 7 of the Kyoto Protocol);
- Implementation of mechanisms: Article 6 projects and emissions trading (Article 17).

13. Within these priority areas for capacity-building, the specific needs of EIT Parties can be grouped into the following:

- Institutional capacity;
- Human resource development;
- Knowledge and information;
- Methodologies.

14. By grouping the specific needs identified by EIT Parties and linking them to the priority areas for capacity-building, the elements of a capacity-building programme can be identified, as presented in the figure below. The same analytical framework is applied in tables 1 and 2 in a matrix format.

Possible elements of a capacity-building programme


Priority areas for capacity-building
Specific capacity building needs
Under the Convention
Improving the quality of the GHG inventories
Implementing policies and measures
Impacts assessment and adaptation
Preparing projections and estimating the effect of policies and measures
Research and systematic
Education, training and public
Technology transfer
Under the Kyoto Protocol
National inventory systems (Article 5)
Compliance (Article 7)
Mechanisms (Articles 6 and 17)
Institutional capacity
Human resource development
Knowledge and information
Methodologies
Climate change institutional frameworks
Strengthening of existing institutions
Sustainability permanence of initiatives/ institutions
Improving the role of national focal points
National/regional coordination centres for Article 6 projects
Coordination programmes at national, regional, local level
Participation of main stakeholders (NGOs, academia, etc.)
Planning and decision-making based on research
Improved infrastructure and equipment for data collection, monitoring, etc.
Increased number of national experts
Training for specific technical, methodological and policy issues
Awareness and analytical capacity of experts/policy makers regarding technical and political issues
Participation in international/regional meetings
Exchange programmes among Parties
Organization of workshops
Development of "pool" of expertise/skills
Integration of climate change in educational
Access to means of information exchange
Set up national/regional information centres
Networks for transfer of experience
Participation and organization of workshops, technical meetings
Public awareness campaigns
Development/adaptation of informative and educational materials
Research in specific areas
Improving adaptability of methodologies to local needs
Increased access to methodologies and participation in methodology development

V. SYNTHESIS OF INFORMATION ON CAPACITY-BUILDING NEEDS AND PRIORITIES

A. Capacity-building needs and priorities related to the implementation of the Convention

1. General capacity-building needs

15. EIT Parties identified the following general capacity-building needs. These general capacity-building needs form the foundation for developing and sustaining capacity in more specific areas related to the implementation of the Convention and the Kyoto Protocol:

- Financial resources;
- Institution strengthening;
- Systematic human resource development and regular training;
- Consistent participation in international workshops;
- Establishment of national and regional information centres;
- Development and promotion of economic, legislative and enforcement mechanisms;
- Increased public awareness;
- Wider access and use of the Internet.

2. GHG inventory

16. EIT Parties provided the most information on their capacity-building needs related to GHG inventories. This is expected, given that most EIT Parties have submitted several annual GHG inventories and have gained some experience with them. The recent United Nations Institute for Training and Research (UNITAR) workshop also allowed for an exchange of views among EIT Parties on the challenges they face with respect to preparing their national GHG inventories and highlighted the increased awareness of the importance of inventory estimates in relation to the implementation of the Kyoto Protocol.

17. The submissions by EIT Parties affirm the challenges and general capacity-building needs presented at the recent UNITAR workshop. As summarized at that workshop, the key challenges EIT Parties face related to the preparation and timely submission of annual GHG inventories are the following:[4]

- Lack of financial, material and human resources;
- Lack of equipment;
- Insufficient institutional frameworks, including lack of coordination between relevant national organizations;

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[4] For the reports of the Parties and a summary report on the challenges faced by EIT countries, go to the UNITAR web site at www.unitar.org/cctrain/eit.

- Insufficient training of staff, scarce information on the latest developments, limited Internet access;
- Limited funds for research related to country specific problems, including emission factors and estimates of uncertainty;
- Problems with collecting statistical data in general, and in the energy sector and for hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF_6) in particular;
- Need for closer links to international organizations which provide information and guidance on GHG inventories (Intergovernmental Panel on Climate Change Task Force on National Greenhouse Gas Inventories, UNFCCC secretariat, Organisation for Economic Co-operation and Development, International Energy Agency and European Environmental Agency.

18. The capacity-building needs mentioned above were further elaborated in the submissions of EIT Parties. These are summarized below.

19. In terms of *institutional capacity*, EIT Parties stated that existing institutions should be strengthened, following the initial experience in preparing GHG inventories, to undertake new tasks related to Article 5 of the Kyoto Protocol on the establishment of national inventory systems. This includes capacity-building for appropriate legislation and enforcement mechanisms, effective data management systems and electronic links among institutions at the national and international levels.

20. In the area of *human resource development*, the capacity-building needs of EIT Parties include financial support to ensure permanent inventory teams and to increase the number of national experts, increased training and participation in relevant international and regional events (workshops, expert meetings, etc.), and the exchange and networking of experts from EIT Parties.

21. The training of inventory experts has been described as a priority in view of the additional requirements for GHG inventories resulting from the adoption of new guidelines. Training in the application of the IPCC Good Practice Guidance, the IPCC 1996 Revised Guidelines for National Greenhouse Gas Inventories, and the new UNFCCC guidelines on annual inventories have been identified as essential for the timely adoption of the new guidelines by the EIT Parties. Many of the EIT Parties mentioned the UNITAR workshop as a good example in this direction.

22. Most of the EIT Parties mentioned the need for better *access to knowledge and information* on the latest developments in the area of GHG inventories through participation in relevant meetings or through electronic and other means. Many EIT Parties noted the lack of a regional network for sharing experience, information and knowledge. Most EIT Parties still have no web sites to post their annual inventories and to share their experiences and the knowledge they have gained. As a result, most of the EIT Parties stated that capacity-building should ensure adequate financial and technical support for better information flow and exchange, and the

establishment of clearing house mechanisms to improve access to the latest software and technical means for processing and communicating GHG inventory information and knowledge.

23. EIT Parties stressed the importance of capacity-building in the development, application and adaptation of international methodologies related to GHG inventories. The areas mentioned that need timely improvement relate mainly to activity data collection, management, quality control and assurance, changes in nomenclatures, and consistency of data series, as well as the development of country-specific emission factors and methods for estimating emissions and removals from certain emission sources and sinks in order to eliminate identified gaps in GHG inventories. Some EIT Parties also specified particular methodological issues in the estimation of emissions of "new gases" (LAT), oil shale (EST), and carbon dioxide (CO_2) removal (HUN).

3. Implementing policies and measures

24. The capacity-building needs for implementing policies and measures to limit anthropogenic GHG emissions and to protect and enhance GHG sinks and reservoirs (referred to as policies and measures) include many of the general capacity-building needs for the development of comprehensive national strategies aimed at achieving emission reduction targets in a cost-effective manner. Most of the specific needs identified by EIT Parties focused on the development of the *institutional capacities* needed to establish the necessary environment (financially, politically, socially) for the implementation of policies and measures. The specific capacity-building needs outlined by EIT Parties for implementing policies and measures emphasized economic and legislative needs, rather than technical needs, and include:

- Establishment of relevant institutions and ensuring better coordination among them;
- Increased capacity to promote private sector involvement;
- Sharing of experience, information and knowledge in improving decision-making in relation to identifying and implementing policies and measures;
- Establishment of legal and enforcement mechanisms for promoting policies and measures;
- Development of economic incentives and sharing of experience related to their development and implementation (e.g. funds, soft interest rates).

25. EIT Parties identified the possibility of future capacity-building needs that may arise in developing an internationally-coordinated approach to policies and measures among EIT Parties and Annex II Parties, where the expertise is more developed. This implies the need to improve cooperation between EIT and Annex II Parties in the area of developing and implementing policies and measures (CZE).

26. In terms of *human resource development*, EIT Parties indicated their need for guidance on good practices related to the implementation of policies and measures (EST). This capacity-building need implies support for carrying out feasibility studies on the implementation of particular measures and policies, as well as in the development of financial mechanisms to ensure investments in GHG emission reduction projects.

4. Preparing projections and estimating the effects of policies and measures

27. The specific capacity-building needs identified by EIT Parties focused on the application and adaptation of international *methodologies* to project and estimate the effects of policies and measures. However, the general capacity-building needs for *institutional strengthening* and *human resource development* are equally relevant.

28. EIT Parties specified that guidance on projecting and evaluating policies and measures would assist them in ensuring consistency in preparing and estimating the effects of policies and measures. EIT Parties suggested that methodological guidance on emission projections could help to reduce the level of uncertainty of projections. Capacity-building is also needed in specific areas such as the identification and elaboration of scenarios of GHG emissions and removals, definition of the emission factors to be used in the projections and assessment of effect of measures; developing information on the technical parameters of future technologies to be used in the projections; and development and application of methods for evaluating uncertainties (BUL). Particular attention is needed for application of models and methods for the projection of non-energy-related emissions (HUN), energy demand models, and transportation models (BUL).

29. Basic guidelines and training for evaluating and reporting of effects of policies and measures using the experience of Annex II countries were also identified as specific capacity-building needs. Such guidelines and harmonization of approaches could improve the assessment of the effects of policies and measures and allow for their comparison across countries, contributing to the transparency, accuracy and consistency of the estimates. In addition, providing the appropriate teams in EIT Parties with standardized computer programs for evaluating emission reductions, cost assessment and the overall assessment of the effects of policies and measures would be helpful.

5. Vulnerability and adaptation

30. EIT Parties stated that their most important capacity-building needs relating to vulnerability and adaptation are the development of appropriate *human resources* and the development and application of various *methodologies*, and the continuation of research.

31. EIT Parties indicated the needs for establishing research programmes and activities in the area of vulnerability assessment and adaptation. In particular, specific needs were indicated to enhance capacity to undertake economic and environmental assessment of the adaptation strategies, and risk assessments of the negative impacts of climate change. EIT Parties also identified the following priority areas where methods and models are necessary for the assessment of the impacts of climate change: agricultural production, water resources, coastal protection, waste management, human health, economy.

6. Research and systematic observation

32. The development of a research and observing system for climate processes is stated as a capacity-building priority in the submission of the Russian Federation. In its submission, Croatia

announced its plan to nominate a Global Climate Observing System (GCOS) station representative. Both Parties requested the necessary capacity-building support to achieve these goals.

33. By its decision 5/CP.5, the COP invited the secretariat of the GCOS, in consultation with relevant regional and international bodies, to organize regional workshops on research and systematic observation. The implementation of this decision will contribute to the *human resource development* and *knowledge and information* needs of EIT Parties.

7. Education, training and public awareness

34. In order to facilitate the implementation of education, training, and public awareness in EIT Parties, *institutional capacity-building* is needed. EIT Parties suggested the establishment of national and regional information centres to meet this specific need and to ensure sustained and efficient implementation of education, training, public awareness, information exchange and cooperation activities. In particular, EIT Parties stated the need to increase the awareness of management bodies (ministries and other relevant institutions) and government officials in order to improve decision-making and cooperation under the Convention.

35. EIT Parties are conscious of the need to involve non-governmental organizations, the private sector, academia, and other stakeholders in their climate change activities. Long-term measures on education, training, and public information will increase public awareness, improve professional skills of experts, and contribute to the development of local capacities (RUS).

36. At present, the development of human resources in EIT Parties in the field of climate change relies on external activities rather than on locally initiated human resource development programmes. In many EIT Parties, there are few experts who have been trained in the international methodologies and exposed to the policy context of the Convention. The number of experts should be increased to widen the pool of qualified experts who can contribute to the implementation of the Convention (RUS).

37. EIT Parties suggested the following activities to meet some of the capacity-building needs in the area of education, training and public awareness: participation of experts from EIT Parties in international workshops, conducting of national workshops, training and certificate programmes, on-the-job training, exchange of information on the state-of-the-art in the area of climate change (BUL).

38. EIT Parties suggested that public education should be developed taking into account the situation in EIT Parties and to highlight win-win options. Funding is needed to finance the preparation of educational materials, and television programmes, support the activities of non-governmental organizations, incorporate climate change education into school curricula, and other actions (HRV). In this context, the sharing of experience of Annex II Parties in designing and developing information campaigns, clearing houses for information sharing, and enhancing of public awareness could be an effective contribution.

8. Technology transfer

39. Technology transfer is not directly addressed in the submissions of EIT Parties. Some EIT Parties implied the need for improving their technological infrastructure and the timely acquisition of state-of-the-art hardware and software, technologies and information.

B. Capacity-building needs and priorities related to the Kyoto Protocol

40. The capacity-building needs of EIT Parties related to the implementation of the Kyoto Protocol focus on Articles 5, 6, 7 and 17 of the Protocol. The capacity-building needs arising out of these articles are treated together since they are closely linked.

41. The needs associated with the implementation of the Kyoto Protocol were addressed at the Bonn workshop, where Parties agreed that capacity-building is critical to the effective participation of EIT Parties in the Kyoto Protocol process. In this context, EIT Parties expressed support for the draft proposal for a support programme for national inventory systems in countries with economies in transition, which was developed out of the UNITAR workshop. EIT Parties agreed to provide feedback on the draft proposal by April 2000, taking into consideration the specific capacity-building needs identified at the Bonn workshop concerning the implementation of guidelines related to Articles 5, 6 and 7 at the national level. UNITAR was requested to update the proposal accordingly and submit it to Parties for further consideration.

42. In terms of Articles 5, 6, 7 and 17 of the Protocol, EIT Parties indicated the need for building *institutional capacity* for establishing national inventory systems, compliance systems and systems for monitoring, reporting, verification, registration and accounting of GHG emission reductions. The effective establishment of these systems will depend on the coordination and participation of all stakeholders and the strengthening of institutions designated to implement the national system for the estimation of the GHG emissions and preparation of annual inventories of GHG emissions. In order for these systems to provide the necessary information required for the purposes of complying with Article 3 of the Kyoto Protocol, additional financial and technical support is needed.

43. Although the overall institutional framework for the systems mentioned above has not been defined yet, it has been indicated that there is a need to establish coordination units in each EIT Party to deal with the Kyoto Protocol mechanisms. The national legislative basis for supporting the implementation of the Kyoto Protocol mechanisms and the national systems should be developed and tested before the first commitment period of the Kyoto Protocol, and integrated into an international system (RUS).

44. Given the interdisciplinary nature of implementing the Kyoto Protocol mechanisms, it is necessary to develop the *human resources* of EIT Parties. The training of experts should include both long- and short-term training. Special consideration should also be given to the development of human resources in the verification and certification entities, which may emerge to implement the Kyoto Protocol mechanisms.

45. The current expertise of experts in EIT Parties in environmental management and negotiation, environmental economics, and environmental education needs to be increased. EIT Parties enumerated some of the specific areas of human resource development: setting criteria for Article 6 project validation and registration, calculation of baselines and emission reductions, monitoring, verification, establishment of a national registry, and reporting. Various aspects of project design, development, application and negotiation were also considered as important areas for human resource development.

46. The implementation of Article 6 projects requires the participation of stakeholders in the design, selection, implementation and verification of projects. In order to improve the flow of information to stakeholders, EIT Parties suggested the establishment of national and regional coordination centres to facilitate the exchange of information.

47. Manuals and guidelines on baselines, cost analysis, evaluation of economic and financial parameters of projects, contract preparation, reporting, monitoring, etc. were also identified as useful to raise the analytical knowledge of experts and decision-makers. Access to computer programs which facilitate common procedures in project design such as estimating GHG emission reductions, costs, and standard contractual provisions, increases the efficiency of the project development process and enhances participation and the eventual implementation of the Kyoto Protocol mechanisms.

48. The implementation of Articles 5, 6, 7 and 17 is expected to contribute to the refinement of further international methodologies and guidelines presently under development by Parties. EIT Parties expressed the need to build their capacity to apply and adapt these international methodologies. In some cases, EIT Parties suggested the need for methodologies and guidelines on compliance, prevention of non-compliance and consequences of non-compliance (ROM) and for practical, schematic and transparent baseline guidelines (e.g. sector-by-sector, activity-by-activity), which can be used in Article 6 project preparation (CZE). Such guidelines could assist EIT Parties in negotiating projects with investing countries and the private sector during the preparatory stage of Article 6 projects and expedite their further development and implementation. In the same context, demonstration projects that include, in particular, risk and cost assessments (HRV) would contribute to building capacity in EIT Parties.

VI. CONCLUSIONS

49. As this note suggests, EIT Parties share many capacity-building needs. However, EIT Parties are not a homogeneous group and their experience varies in terms of implementing their commitments under the Convention. While this note attempts to highlight the common capacity-building needs of EIT Parties and synthesize them within an initial framework for capacity-building, efforts to support capacity-building in EIT Parties should be mindful of the need for country specificity.

50. As stated in the UNITAR and Bonn workshops and in the submissions of EIT Parties, capacity-building is urgently needed by EIT Parties to sustain and further develop the existing capacities they have developed to address climate change. EIT Parties emphasized that their

existing capacities are mainly threatened by the financial constraints they face due to their economic and political situation. In addition, these financial constraints affect the ability of EIT Parties to participate effectively in the meetings and workshops of the UNFCCC process and other relevant intergovernmental processes.

51. The submissions by EIT Parties on their capacity-building needs and priorities represent a first attempt at better defining these needs and participating in developing a framework through which these needs might be addressed. Given the uniqueness of this exercise, EIT Parties indicated their present capacity-building needs in terms of objectives (e.g. improve national inventories, improve preparation of projections) without elaborating in detail on to how these objectives might be met. In this respect, the implementation of pilot programmes focused on capacity-building could provide useful in-country experience needed to better identify, define, approach and measure capacity-building.

52. The essential requirement for capacity-building is continuity. The activities that have taken place in EIT Parties so far have been project-based in nature. The capacities acquired during the lifetime of projects proved useful, but need to be sustained and further developed. This is one of the main challenges for capacity-building in EIT Parties.

53. Capacity-building for EIT Parties requires a flexible approach rooted in the objectives and strategies of EIT Parties to implement the Convention and its Kyoto Protocol. It needs to be responsive to existing and emerging needs and cannot simply be a predetermined package intended to bring about a predefined outcome. The process of identifying the capacity-building needs of EIT Parties should continue and be linked to a flexible programme focused on capacity-building, which can adapt to emerging needs without losing continuity and complement more targeted assistance. The initial framework suggested in this note identifies the possible elements of such a programme.

Table 1. Compilation of information on the capacity-building needs and priorities of EIT Parties related to the implementation of the UNFCCC

Priority areas for capacity-building Specific needs		General	GHG inventories	Implementation of policies and measures	Projections and assessment of the effects of policies and measures	Vulnerability and adaptation	Research and systematic observation	Education, training and public awareness
Institutional capacity	Institutional framework	Institutional framework to facilitate cooperation among institutions for the preparation of national communications (BUL) Develop legal infrastructure and legislative basis (BUL, POL, RUS, UKR)	Establish entity to update emission inventories (ROM) Legal infrastructure (confidentiality) (BUL, LAT)				Development of a research and observation system for climate process (RUS) Establish GCOS station (HRV)	
	Strengthening of existing institutions	Financial (and methodological) support (BUL, HRV, HUN, ROM, SLN) Strengthen management bodies and setting up of local self management (RUS) Legal and enforcement mechanisms (UKR)	Improve cooperation with statistical offices (BUL) Improve statistical data collection (CZE) Strengthen existing team (EST)	Institutional strengthening (HUN)	Institutional strengthening (HUN)			
	Sustainability of initiatives	Financial support (CZE) Synergy of activities (ROM)	Financial resources and hardware for permanent staff (LAT)					Development of local bodies for self-management (RUS)

Table 1. Compilation of information on the capacity-building needs and priorities of EIT Parties related to the implementation of the UNFCCC (continued)

Priority areas for capacity-building / Specific needs		General	GHG inventories	Implementation of policies and measures	Projections and assessment of the effects of policies and measures	Vulnerability and adaptation	Research and systematic observation	Education, training and public awareness
Institutional capacity	National coordination of programmes by national focal points.	Strengthen national UNFCCC focal points or national authorities designated to coordinate climate change activities (HRV, ROM) Coordination units (BUL) Financial and methodological support to improve coordination at the national, municipal and community levels (SLN)	Coordination unit (BUL)					
	Participation of stakeholders	Strengthen relevant and key research institutions and NGOs (HRV)	Quality control quality assurance system involving experts from governmental and NGO sector (EST)	Public sector involvement (POL)				
	Infrastructure and equipment	Internet access; web sites (BUL) Data management system (BUL) National technological infrastructure (RUS)	Website on GHG inventories (POL)		Support for procurement of modelling tools (HRV)	Internet access (BUL)	Funds to support observation network at a modern level (RUS)	

Table 1. Compilation of information on the capacity-building needs and priorities of EIT Parties related to the implementation of the UNFCCC (continued)

Priority areas for capacity-building Specific needs		General	GHG inventories	Implementation of policies and measures	Projections and assessment of the effects of policies and measures	Vulnerability and adaptation	Research and systematic observation	Education, training and public awareness
Human resource development	Number of national experts	Involvement of more officials in the negotiation process (UKR)	Additional permanent workplaces (EST)					
	Training	Training of experts HRV, CZE, EST, HUN, LAT, RUS) On-job and hands-on training, repetitive training following the innovations (BUL) Financial support for training national experts and policy makers (SLN)	Further training of experts on new methodologies and guidelines (CZE, EST, LAT, ROM) Estimation of GHG emissions at plant level (POL)	Develop economic and legislative instruments (POL) Improve reporting of policies and measures (EST) Training in instruments in transport sector (HUN)	Support for staff training in mitigation and cost assessment analysis, maeconomic implications of mitigation measures (HRV), Non-energy related emission projections (HUN)	Assessment of vulnerability of economy, health, environment (POL) Risk assessment (HRV, POL)	Define programme and establish and operate GCOS station (HRV)	Long-term measures on education, training, evaluation (RUS) Training of experts, perfecting skills (RUS) Training NGOs (HRV)
	Experts/ policy makers awareness / analytical capacity	Increase awareness of experts and policy makers (SLN)	National certification programme (EST)				Development of national technological infrastructure ensuring systematic observations of climate change and accounting of transfer of GHG (RUS)	Technical training for widening of base of experts familiar with climate change (RUS) Design and implement promotional programmes (HRV)

Table 1. Compilation of information on the capacity-building needs and priorities of EIT Parties related to the implementation of the UNFCCC (continued)

Priority areas for capacity-building Specific needs		General	GHG inventories	Implementation of policies and measures	Projections and assessment of the effects of policies and measures	Vulnerability and adaptation	Research and systematic observation	Education, training and public awareness
	Participation in international/ regional meetings	Participation in international workshops (BUL, CZE, LAT)					Support for cooperation of EITs with IPCC and the GCPS (CZE)	
Human resource development	Exchange programmes and cooperation	Exchange programmes (BUL, LAT) Involvement in international research (HUN)					Support for appropriate international and intergovern-mental programmes, networks, efforts (RUS)	
	Workshops	Local workshops and experience sharing (BUL, CZE)						
	Educational curricula							Integration of climate change issues (BUL, HRV, RUS)
Knowledge and information	Access to means	Access to information on state-of-the-art methods and software; in-time software/hardware acquisition (BUL)			Procurement of modelling tools (HRV)			

Table 1. Compilation of information on the capacity-building needs and priorities of EIT Parties related to the implementation of the UNFCCC (continued)

Priority areas for capacity-building / Specific needs		General	GHG inventories	Implementation of policies and measures	Projections and assessment of the effects of policies and measures	Vulnerability and adaptation	Research and systematic observation	Education, training and public awareness
	Clearing houses	Information database (BUL, HRV, RUS)	Development and management of database of GHG emissions, including national emission factors (ROM)					National and regional centres for information exchange (EST, UKR)
Knowledge and information	Networks for transfer of experience	Promotion of regional cooperation through national and regional centres for information exchange (EST)	Financing and experience sharing on "new gases" (LAT)	Transfer of experience in integrated resource planning and sustainable management (HRV) Cooperation with Annex II Parties (CZE)	Involvement in international research (HUN)			Regional cooperation (EST)
	Public awareness	Information centres (UKR)		Awareness of ways to reduce GHG emissions (BUL)				Increase awareness (BUL, HRV, RUS, SLN, UKR) Media communication (HRV)
	Materials	Guidelines development (CZE, EST)						Funding for publication and preparation of materials, TV programmes, publishing studies (HRV)

Table 1. Compilation of information on the capacity-building needs and priorities of EIT Parties related to the implementation of the UNFCCC (continued)

Priority areas for capacity-building Specific needs		General	GHG inventories	Implementation of policies and measures	Projections and assessment of the effects of policies and measures	Vulnerability and adaptation	Research and systematic observation	Education, training and public awareness
Methodologies	Research	Develop country-specific research and studies (BUL, EST, LAT, UKR) Involvement in international research activities (HUN)	Improve GHG inventories (HRV, EST, HUN, POL, SLN) Country-specific emission factors and methods (BUL, HRV, EST, POL, UKR) Uncertainty estimates (BUL, POL)	Methods and tools for transport sector (HUN)	Improve GHG emission projections and assessment (HUN, POL) Develop scenarios; future technical parameters of technologies used for projections (BUL)	Research in vulnerability and adaptation (HRV, HUN, LAT, POL)		
	Adaptability to local needs		Adjustment of activity data nomenclatures (BUL) Adjustments for continuous time-series (BUL, CZE) Methods for activity data quality control and assurance; estimation of uncertainty (BUL) Preparation of regional guidelines for good practices in GHG inventories (EST)	Regional guidelines for implementation of policies and measures (CZE, EST)	Elaborate scenarios (BUL, POL) Definition of emission factors, evaluation of uncertainty; quantification of impacts of policies (BUL) Methodological guidelines for emission projections (CZE, EST) and estimates of effects of policies and measures (EST)	Establishment of adaptation programmes (POL) Uncertainty (BUL) Assessment of socio-economic damage, especially coastal areas and agricultural land (HRV)		

Table 1. Compilation of information on the capacity-building needs and priorities of EIT Parties related to the implementation of the UNFCCC (continued)

Priority areas for capacity-building Specific needs		General	GHG inventories	Implementation of policies and measures	Projections and assessment of the effects of policies and measures	Vulnerability and adaptation	Research and systematic observation	Education, training and public awareness
	Access to methodologies		Application of models and methods (HUN)		Guidelines on projections and evaluation of policies and measures (CZE) Application of models and methods (HUN)	Application of models and methods (HUN)		

Table 2. Compilation on information on the capacity-building needs and priorities of EIT Parties related to implementation of the Kyoto Protocol

Priority areas for capacity-building Specific needs		Establishing national system for the estimation of GHG emissions (Article 5)	Preparing information for the purposes of ensuring compliance with Article 3 of the Kyoto Protocol (Article 7)	Implementation of the flexible mechanisms: joint implementation (Article 6) and emissions trading (Article 17)
Institutional capacity	Climate change institutional frameworks	Organizational, institutional and legislative arrangements (HRV) Technical and financial assistance in establishing national systems (EST, POL, ROM) and managing database of national systems (POL) Develop adequate and regular national GHG data collection (UKR) Establish system for data collecting, processing, archiving, reporting, and quality control and assurance (POL, ROM, RUS, SLN)	Establish national compliance system (ROM) Legislative basis for non-compliance and evaluation of existing legislation with a view to adapting to emerging international compliance procedures (RUS)	Establish institutional links and the legislative basis for implementation of the Kyoto Protocol (HRV) Institutional strengthening (HUN) Consultations on establishing and operating emissions trading system (POL) Establish legislative basis (RUS) Establish administrative infrastructure (UKR) Establish monitoring system, verification, certification of emission reduction (POL, UKR)
	Coordination programmes	Improved coordination (EST)		
	Participation of stakeholders	Participation of stakeholders (EST)		
	Planning			Coherent strategy (BUL) Establish national joint implementation (JI) programme (UKR)
	Infrastructure and equipment	Web page (POL)	Technological equipment for an infrastructure (RUS)	Technological equipment infrastructure (RUS)

Table 2. Compilation on information on the capacity-building needs and priorities of EIT Parties related to implementation of the Kyoto Protocol (continued)

Priority areas for capacity-building Specific needs		Establishing national system for the estimation of GHG emissions (Article 5)	Preparing information for the purposes of ensuring compliance with Article 3 of the Kyoto Protocol KP (Article 7)	Implementations of the flexible mechanisms: joint implementation (Article 6) and emissions trading (Article 17)
Human resource development	Number of national experts			Technical training for experts (RUS)
	Training	Improve GHG inventory system (, POL) Staff training and transfer of experience in the establishment of organizational, institutional and legislative arrangements (HRV)		Training in establishing and operating emissions trading system, estimation of GHG emissions at plant level (POL, UKR) Training in JI procedure and implementation, training and certification of independent companies (BUL) Training to calculate baselines for JI (BUL, HUN, LAT, UKR) Training of experts and policy makers (EST)
	Experts/policy makers awareness / analytical capacity			Building capacity for identification of projects, their formulation and designing (HRV) Starting up demonstration projects to build capacity, including risk and cost assessment (HRV)
	Workshops	Participation and organization (BUL)	Good practice workshops for exchange of information on JI and emissions trading (EST, LAT)	
	"Pool" of expertise			Develop "local expertise" (EST) Demonstration projects (HRV)
Knowledge and information	Networks for transfer of experience		Consultations in determining compliance (ROM)	Consultations on establishing and operating emissions trading system (POL, ROM)
	Public awareness			Public awareness (BUL, HRV, RUS)

Table 2. Compilation on information on the capacity-building needs and priorities of EIT Parties related to implementation of the Kyoto Protocol (continued)

Priority areas for capacity-building Specific needs		Establishing national system for the estimation of GHG emissions (Article 5)	Preparing information for the purposes of ensuring compliance with Article 3 of the Kyoto Protocol KP (Article 7)	Implementations of the flexible mechanisms: joint implementation (Article 6) and emissions trading (Article 17)
Knowledge and information	Workshops			Training experts and policy makers (EST)
		Research	Develop national or regional emission factors, conducting special research in this area (UKR)	Studies (RUS)
	Adaptability to local needs		Capacity to prepare in time annual inventories, together with the necessary supplementary information for the purposes of ensuring compliance with Article 3 of the Kyoto Protocol (SLN).	Develop criteria for project selection (BUL, UKR) Establish system for monitoring, reporting, verification, registration, accounting and certification of ERUs (HUN, POL, ROM, RUS, UKR)
	Access to methodologies			Guidelines on baselines and AIJ/JI preparation (BUL, CZE, HUN, UKR) Application of models and methods (HUN)

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CAPACITY-BUILDING

CAPACITY-BUILDING IN DEVELOPING COUNTRIES (NON-ANNEX I PARTIES)

Compilation and synthesis of information from Annex II Parties and relevant intergovernmental organizations on their capacity-building activities and programmes

Note by the secretariat

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I. MANDATE

1. By its decision 10/CP.5,[1] the Conference of the Parties (COP) requested the secretariat to compile the following information on activities and programmes which facilitate capacity-building in developing countries in the area of climate change:

(a) Information contained in national communications of Annex II Parties;

(b) Information submitted by Annex II Parties to supplement the information contained in their national communications, and;

(c) Information submitted by relevant intergovernmental organizations.

2. In addition, it requested the secretariat to take into account the list of capacity-building needs of developing countries contained in the annex to decision 10/CP.5, and the results of inter-sessional workshops held prior to the twelfth sessions of the subsidiary bodies (decision 10/CP.5, para 5 (c)).

II. SCOPE OF THE NOTE

3. This note compiles and synthesizes the above-mentioned information. A full list of the various sources of information reviewed for this compilation and synthesis is to be found in annex I.

4. Section III of this note describes the approach used to compile and synthesize the available information as well as the limitations of the information provided. Section IV contains an overview and synthesis of the compiled information. Section V contains conclusions and some observations about the compiled information and the compilation exercise. Annex II contains summary tables of the compiled information.

5. Most of the Annex II Parties have reported and submitted information on activities and programmes which facilitate capacity-building in countries with economies in transition (Parties included in Annex I but not included in Annex II).[2] Since the secretariat was requested to compile information relevant to capacity-building in developing countries, it did not include information relevant to capacity-building in countries with economies in transition in preparing this note.

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[1] For the full text of decisions adopted by the Conference of the Parties at its fifth session, see document FCCC/CP/1999/6/Add.1.

[2] The submission of Canada refers exclusively to capacity-building activities and programmes in Parties with economies in transition.

III. APPROACH TO THE COMPILATION AND SYNTHESIS

6. In preparing this note, as requested in decision 10/CP.5, para 5 (c), the secretariat took into account the list of capacity-building needs and priorities contained in the annex to that decision. As much as possible, the secretariat used the list of capacity-building needs and priorities first, as a guide to identify and compile relevant information on capacity-building activities and programmes contained in the national communications of Annex II Parties, and second, as a framework for synthesizing the compiled information.

7. Due to the limitations of the available information, as explained below, the compilation and synthesis of activities and programmes which facilitate capacity-building is limited to the following parameters:

(a) To provide examples of activities and programmes which appear to be responsive to the capacity-building needs and priorities identified in the annex to decision 10/CP.5 without any determination of whether or not needs have been met, and without any assessment of the capacity-building activities and programmes;

(b) To provide indications about the range of the reported activities and programmes under each of the headings in the annex to decision 10/CP.5;

(c) To provide an overview of the reported activities and programmes, mindful of the limitations of the available information.

8. Due to the late submission of information by Parties and intergovernmental organizations and the short time given to the secretariat to prepare the documents requested in decision 10/CP.5, this note is not linked to the compilation and synthesis of information on the capacity-building needs of non-Annex I Parties contained in document FCCC/SB/2000/INF.1. In this context, mindful of the limitations of the documents requested in decision 10/CP.5, Parties at the twelfth sessions of the subsidiary bodies may wish to provide further guidance on how the information requested in decision 10/CP.5 may be presented in order to better contribute to the development of the elements of a draft framework for capacity-building.

A. Information on activities and programmes of Annex II Parties

9. The information contained in national communications of Annex II Parties did not lend itself easily to compilation and synthesis. Relevant information contained in national communications of Annex II Parties is generally found in the sections entitled *Financial Resources and Transfer of Technology*, and *International Activities*. In most cases, the activities and programmes reported in national communications are not specified as capacity-building, and do not contain adequate information to describe their capacity-building nature. In some cases, activities and programmes are reported as capacity-building without any information describing the capacity-building element of the activity or programme. Thus, the process of identifying capacity-building activities and programmes in national communications is difficult and subject to interpretation. The difficulty in distinguishing capacity-building activities and programmes

from other types of assistance renders the information contained in national communications uncertain.

10. In addition, the level of information on capacity-building activities and programmes in national communications of Annex II Parties is not such that it can be disaggregated in accordance with the list in the annex to decision 10/CP.5. The type and level of detail of the information varies significantly, so much so that in order to describe the capacity-building activities and programmes reported in the national communications, it was necessary to limit the descriptive information to the minimum available in all cases. This inadequacy of the information limited the synthesis to a more general level.

11. Information submitted by Annex II Parties to supplement the information on capacity-building activities and programmes in their national communications was generally useful in grouping the reported activities following the annex to decision 10/CP.5. In most cases, however, the information provided was inadequate to describe the capacity-building components of the reported activities. This was particularly true of activities and programmes that included capacity-building as only one of many objectives. On the other hand, a few submissions provided information that included some criteria for defining capacity-building activities from the point of view of the submitting Party, and examples of activities and programmes which the submitting Party considered as meeting those criteria.

12. Some Annex II Parties stated that the information they provided represents only a subset of their capacity-building activities and programmes. Thus the information compiled and synthesized in this note does not in any way represent all existing capacity-building activities and programmes of Annex II Parties.

B. Information on activities of intergovernmental organizations

13. In response to requests from intergovernmental organizations, the secretariat provided a format for the submission of information by such organizations on their ongoing capacity-building activities. The format suggested by the secretariat follows the framework suggested in the annex to decision 10/CP.5. This format facilitated the compilation of the submitted information. In addition, some organizations provided background information to better describe their capacity-building activities.

14. However, despite the format in which information was provided, the same difficulties encountered in compiling the information provided by Annex II Parties were experienced in compiling the information from intergovernmental organizations. In many cases, the kind as well as the level of detail of the information provided varied significantly. In addition, many submissions did not provide adequate information describing the activities or identifying the activities' capacity-building components. The lack of information describing the activities in terms of their objectives and other basic information made it difficult to classify the activities against the annex in decision 10/CP.5. Furthermore, some organizations explicitly stated that their submissions did not necessarily cover the full range of their relevant capacity-building activities.

15. Relevant activities carried out by the Global Environment Facility (GEF) through its implementing agencies are not included in this compilation and synthesis except for those reported by Annex II Parties and intergovernmental organizations. As requested in decision 10/CP.5, paragraph 5 (f), the secretariat will report at the twelfth sessions of the subsidiary bodies on progress in the review by the GEF of its enabling activities, its capacity-building activities in the normal work programme, its Country Dialogue Workshops and its Capacity Development Initiative.

IV. SYNTHESIS OF COMPILED INFORMATION

16. In considering the compiled information, it should be noted that most of the reported activities and programmes are aimed at objectives which may not necessarily relate to the list of capacity-building needs in the annex to decision 10/CP.5. However, they may have relevance to climate change and include components that relate to the list of capacity-building needs. For example, many of the reported activities and programmes are directed towards forest conservation, cleaner production and energy efficiency, which may have the effect of mitigating climate change through greenhouse gas (GHG) emission reductions or removals by sinks. In most of these cases, the activities and programmes include components such as training, public awareness, policy development and institution strengthening, which may facilitate capacity-building.

17. Given the volume as well as the limitations of the information provided, the synthesis under each of the main headings in the annex to decision 10/CP.5 is limited to providing an overview of the reported activities and programmes and examples of those activities and programmes which appear to relate to that list.

A. Institutional capacity-building

18. Twelve Annex II Parties[3] provided information on activities and programmes which focus on institutional capacity-building. Most of these activities and programmes are aimed at building the capacity of national and regional institutions to implement national action plans and prepare national communications. These objectives are achieved through strengthening national UNFCCC focal points, relevant research institutions, and non-governmental organizations.

19. Examples of the reported activities and programmes for institutional capacity-building are:

- Establishment of a regional centre to serve as a resource base of scientific expertise and data, and analytical and interpretative skills for countries of the Association of South-East Asian Nations;

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[3] AUS, DEU, DNK, EU, ITA, JPN, NLD, NOR, NZL, PRT, SWE and the USA (for full country names, see annex I).

- Establishment of regional centres on global change and terrestrial ecosystems;

- Strengthening of meteorological systems to support food production and drought monitoring;

- Assistance to governments of States in the Pacific region in planning and implementing measures to adapt to the impacts of climate change, including a component on outreach to communities of the small islands;

- Enabling institutions in developing countries to implement national action programmes and projects to reduce GHG emissions;

- Enhancement of capacities and commitments of governments and institutions to plan and implement integrated biomass energy conservation programmes;

- Contribution to the adaptation of institutional and regulatory frameworks that promote sustainable development;

- Assistance in the preparation of national environmental management strategies;

- Technical assistance for demand-side resource management, including institution strengthening.

20. Seven intergovernmental organizations[4] reported activities aimed at institutional capacity-building. Twelve of these activities are implemented in Asia, including two projects specifically concerning China. Eight activities are implemented in Africa, and nine in Latin America and the Caribbean. Several of these activities include national and regional workshops, and university-based certificate programmes, and one project is aimed at strengthening the negotiating capacity of the Group of 77. Several of the projects focus on increasing the understanding of financial mechanisms, available technologies, and international environmental law and legal frameworks.

21. Examples of the reported activities for institutional capacity-building are:

- Establishment of climate change country teams;

- Education and training of key personnel in universities, non-governmental organizations, and government ministries; "training the trainers", etc;

- Enhancement of national, institutional and human capacity in cross-sectoral approaches to energy issues;

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[4] DESA, FAO, OAS, UNDP, UNEP, UNITAR and WMO (for full titles, see annex I).

- Improvement of the public sector by developing the water resources services so as to provide the necessary meteorological, hydrological and environmental information;

- Support for sectoral policies supporting environmentally sound practices.

B. Capacity-building under the clean development mechanism (CDM)

22. Four Annex II Parties[5] provided information on activities and programmes which facilitate capacity-building under the CDM. The activities and programmes were divided roughly between those which involved workshops, meetings, and seminars, and activities and programmes which provide support for national studies, training, and information exchange. Most of the workshops, meetings and seminars were regional activities targeting public and private sector representatives, experts, policy makers, and academics. These were spread out in Africa, Latin America, Asia and the Pacific, and small island developing States. The other activities and programmes were focused on establishing institutional linkages for the CDM, identifying and designing CDM projects, developing baselines and other data, the project negotiation skills of developing country representatives, and implementing demonstration projects.

23. Examples of the reported activities and programmes for capacity-building under the CDM are:

- Establishment of CDM secretariats and workshops to enhance the understanding of the CDM;

- Support to overseas partners to facilitate commercial projects with the potential to deliver GHG emission reduction credits while developing the project management capacity of host countries;

- Creation of monitoring units, enhancement of capacity to prepare environmental statistics and analysis, and development of air quality monitoring and management systems;

- Support for developing policy frameworks to enhance environmental cooperation on flexible mechanisms;

- Strengthening of academic cooperation to build capacity and understanding of the challenges and opportunities of the CDM;

- Support for the establishment of South-North knowledge networks on climate change, focusing on the Kyoto Protocol mechanisms and the CDM in particular;

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[5] AUS, EU, NOR and the USA.

- Holding of the Climate Network Africa Workshop on the CDM and the Kyoto Protocol;

- Holding of the Workshop for small island developing States on Climate Change and the CDM;

- Holding of a national capacity-building workshop in Ecuador to explore market-based mechanisms;

- Organization of a seminar on potential CDM projects in the Brazilian renewable energy sector;

- Organization of a "Business Dialogue" in India on the CDM;

- Holding of three regional workshops in Africa, Asia and Latin America on CDM implementation issues.

24. Seven intergovernmental organizations[6] reported activities relevant to capacity-building under the CDM. There are six activities in Asia, four in Africa, and five in Latin America and the Caribbean. UNIDO is also implementing a research project to investigate the additionality of possible CDM activities. Several of the projects involve research into industry frameworks, country studies, and raising awareness. Although decision 10/CP.5 focuses on the capacity-building needs of non-Annex I Parties, one of the World Bank projects also concerns Parties with economies in transition. Many activities include components on CDM project identification and formulation, development of baselines, and data acquisition. These components are addressed through workshops, sharing information and lessons learned among Parties, and networking. Some activities also aim to develop pilot projects and establish technical assistance groups within national and regional institutions. In general, this area was often combined with significant emphasis on technology transfer and fostering international dialogue.

25. Examples of the reported activities for capacity-building under the clean development mechanism include:

- Dissemination and maintenance of information pertaining to the CDM and the definition of incentive mechanisms;

- Project identification;

- Provision of a conceptual framework for baseline development;

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[6] ADB, FAO, OAS, UNDP, UNEP, UNIDO and the World Bank.

- Enhancement of awareness and understanding of the institutional design of the CDM.

C. Human resource development

26. Thirteen Annex II Parties[7] provided information on activities and programmes that facilitate capacity-building for human resource development. Generally, these activities and programmes take the form of support for scholarships and fellowships for formal training at higher levels, the development of a "pool" of expertise, studies on climate variability and impact assessments, workshops, exchange programmes and other forums for networking, and the integration of climate change into educational curricula.

27. Examples of the reported activities and programmes for human resource development are:

- Conducting of courses on national inventories and policy formulation;
- Provision of training aimed at enhancing countries' capacities to respond to climate change impacts;
- Conducting of a series of technical training and development courses on GHG mitigation, project opportunities, and methodologies;
- Provision of training programmes on decision-making for public and private sector personnel in effective energy, utility, and general environmental management;
- Provision of distance learning programmes on climate change, and industrial peer exchange programmes;
- Teaching of local communities on environmentally-friendly techniques;
- Support for curriculum development, postgraduate programmes, and general environmental management courses;
- Training and promotion of private energy service companies, monitoring and evaluation programmes, advocacy for national appliance efficiency standards and building energy codes, and support for non-governmental organizations in Brazil;
- Joint effort with national experts in economic modelling and environmental policy to improve capacity to analyse the costs of policies to limit GHG emissions.

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[7] AUS, DEU, DNK, EU, FIN, ITA, JPN, NLD, NOR, NZL, PRT, SWE and the USA.

28. Twelve intergovernmental organizations[8] reported capacity-building activities for human resource development in climate change. Human resource development was the capacity-building activity most commonly cited by such organizations. There are 19 programmes in Asia, 13 in Africa, and nine in Latin America and the Caribbean. In addition, there are 18 programmes on a global scale.

29. Examples of the reported activities for human resource development are:

- Sharing of good practices and building of networks of policy makers and practitioners of sustainable energy and climate change strategies;
- Conducting of training workshops on solid waste management and environmental landfill design;
- Conducting of training workshops for refrigeration and compressor manufacturers on renewable energy to promote exchange of views and build consensus on the Kyoto Protocol mechanisms;
- Conducting of national and regional training workshops and packages on preparing GHG inventories, vulnerability and adaptation assessment, mitigation analysis, preparation of national communications and national implementation strategies;
- Improvement of oceanographic data management through training, data acquisition, processing, compilation and exchange;
- Provision of fellowships for trainees from countries with meteorology and hydrology education centres;
- Improvement of understanding of the methods and standards for data in the Global Sea Level Observing System (GLOSS);
- Organization of exchange programmes for South-South transfer;
- Provision of a technical manual for greenhouse gas abatement projects under the CDM, including those with a focus on gender, development, and poverty reduction;
- Implementation of demonstration projects which promote entrepreneurship and dialogue between institutions.

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[8] ADB, DESA, FAO, OAS, UNDP, UNEP, UNESCO, UNIDO, UNITAR, UNU, the World Bank and WMO.

D. Technology transfer

30. Six Annex II Parties[9] provided information on some 23 activities and programmes which facilitate capacity-building for technology transfer. Generally, these projects aim to identify and assess appropriate technologies, fill in technological information gaps, provide support for the necessary equipment and software, and analyse the constraints to successful technology transfer. These objectives are commonly accomplished through training, building partnerships, creating awareness, and promoting environmentally-clean technologies.

31. Examples of the reported activities and programmes for technology transfer are:

- Development of alternative transportation fuels and improvement of the energy efficiency of existing coal-fired plants;
- Promotion of investments in renewable energy technologies, including technical and financial assistance to remove barriers;
- Promotion and facilitation of the sustainable use of solar energy;
- Assistance to reduce production of GHGs in the coal industry, transfer technical and managerial skills, and establish demonstration projects for energy efficiency technologies and services;
- Production of a brochure to disseminate information on building partnerships and strategies;
- Conducting of a workshop on the EU-India forum on renewable energy business development;
- Conducting of regional workshops on technology transfer in Bangladesh, Brazil and Senegal;
- Development of a public/private partnership model in Santiago, Chile in order to help build a local market for alternative transportation fuels.

32. Ten intergovernmental organizations[10] reported activities relevant to capacity-building for technology transfer. There are 14 activities in Asia, including four projects that specifically concern China, five activities in Africa, and nine in Latin America and the Caribbean. There is also one project by the United Nations University, based in Iceland, which focuses on transferring knowledge and skills on alternative energies. This project promotes research on the

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[9] AUS, AUT, CAN, EU, NLD and the USA.

[10] ADB, DESA, FAO, OAS, UNDP, UNIDO, UNITAR, UNU, WMO and the World Bank.

opportunities for geothermal energy. Several projects develop in-country assistance and training on specific technologies, revising technological standards for energy efficiency equipment, analytical modelling, and conducting studies to determine the feasibility of utilizing new technologies in developing countries. Some projects also review the economic, legal and institutional frameworks of introducing new technologies (particularly in conjunction with CDM projects). The transfer of renewable energy technologies to developing countries, particularly for solar energy, is a common focus of these activities.

33. Examples of the reported activities for technology transfer are:

- Dissemination of tools and information, including energy standards, guidebooks, and a web-based information tool kit;
- Formulation of integrated health-related coastal zone management strategies for sewage disposal in Pacific island countries;
- Transfer of advanced commercial renewable energy technologies such as landfill gas recovery;
- Assessment of legal and institutional frameworks of African industrial sectors in which CDM projects may be implemented;
- Improvement of awareness and decision-making by providing advanced meteorological and climate services;
- Improvement of decision-making regarding water infrastructure in Haiti;
- Transfer of a coal briquetting plant in Mongolia;
- Improvement of decision-making and determination of the feasibility of projects to establish early-warning systems for severe weather events such as El Nino;
- Organization of study tours on specific technologies, exchange programmes (South-South technology transfer);
- Conducting of workshops and seminars on energy saving and technology transfer.

E. National communications

34. Five Annex II Parties[11] provided information on activities and programmes which facilitate capacity-building for national communications. The activities and programmes involved developing countries in Africa, Asia and the Pacific, and Latin America and the

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[11] AUS, EU, NLD, NZL and the USA.

Caribbean. Generally, these activities and programmes assist non-Annex I Parties to prepare their national communications by carrying out climate change studies to implement the Convention, including assistance in formulating their own national climate change policies. Many activities also aim to develop local emission factors, prepare vulnerability and adaptation assessments, prepare mitigation analyses, collect and analyse data, and establish technical assistance groups. These objectives are frequently accomplished through regional and national workshops, training courses, and regional networks.

35. Examples of the reported activities and programmes for national communications are:

- Regional workshop in Western Africa on GHG emission inventories, vulnerability, and adaptation analysis training;
- International workshop on the development of national action plans for Asia;
- Pacific Islands Climate Change Assistance Project (PICCAP) workshop on mitigation options;
- Training courses to assist national experts to carry out national inventories and formulate polices on climate change;
- Training for energy professionals in monitoring and verification of GHG emissions;
- Regional workshop on GHG inventories for Central America;
- Assess the potential implications of the UNFCCC and other potential agreements for the forestry sector in key tropical forest countries, building on previous analyses;
- A workshop in Fiji to facilitate the exchange of views and experiences between inventory experts from Australia and Fiji, including a review of the latter's current inventory.

36. Seven intergovernmental organizations[12] reported activities which support capacity-building for the preparation of national communications. There are eight activities in Asia, two in Africa, and four in Latin America and the Caribbean. Several of the regional activities provide training through national and regional workshops and certificate training programmes in vulnerability and adaptation assessment, mitigation analysis, and policy development. The activities also include research, publications, in-country technical assistance, networking, and awareness-raising. UNEP has a programme that builds capacity for assessing the economics of mitigation. The CC: Train programme of UNITAR provides training

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[12] ADB, ESCAP, FAO, OAS, UNEP, UNITAR, and WHO.

workshops and packages related to the preparation of national communications. WHO has a programme for interested international organizations to develop guidelines for determining the health implications of climate change, which could be incorporated in national communications.

37. Examples of the reported activities for national communications are:

- Drafting of national vulnerability and adaptation assessments, mitigation analyses, and policy action plans;
- Provision of training workshops and packages on subjects related to national communications;
- Organization of a university-based certificate course on vulnerability and adaptation assessment;
- Creation of increased pools of expertise to complete regularly scheduled national communications;
- Improvement of methodology for coastal resource valuations and risk assessments, coral reef monitoring, and crafting coastal policies;
- Enhancement of the Caribbean network of sea-level gauges and meteorological sensors;
- Enhancement of regional and national information in diverse ecological circumstances;
- Strengthening of the skills and institutionalized capacities of countries participating in Asia Least-cost Greenhouse gas Abatement Strategies (ALGAS) project in a number of thematic areas related to the commitments of non-Annex I and non-Annex II Parties under the UNFCCC.

F. Adaptation

38. Seven Annex II Parties[13] provided information on some 21 activities and programmes that facilitate capacity building for adaptation to climate change. These activities and programmes involve training, studies, research, workshops and pilot projects. Generally these activities and programmes support improved meteorological services, long-range forecasting methods, early warning systems, climate modelling and weather prediction. In addition, other activities and programmes provide technical support for capacity-building needs for adaptation in the agricultural sector, coastal zone management, and forestry.

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[13] AUS, FIN, ISL, ITA, JPN, NZL and the USA.

39. Examples of the reported activities and programmes for adaptation to climate change are:

- Support to vulnerable island states on environmental and natural resource management issues, development of meteorological services, communication systems and coastal zone management programmes;
- Support to developing island countries to respond to increased erosion and sea level changes caused by climate change;
- Provision of assistance to train Pacific islanders from 13 countries on links between sea level and climate variability, and impact assessment;
- Support for adaptation to climate related changes in production patterns;
- Development of early warning systems, surveillance, and reporting methods on famine to cope with a changed climate;
- Coordination of a series of vulnerability studies with the aim to develop plans for adaptation, the assessment of current and future resource use, and financial support for short-term adaptation and vulnerability studies in Senegal, Asia and the Pacific, and Latin America;
- Conducting of workshops on themes such as a multidisciplinary review of rangeland degradation, global climate change and development in the Philippines, "Farmer-Led Land-care Approach" in the Philippines, and adaptation in the South Pacific;
- Conducting of a workshop in Kazakhstan to examine the connections between the economy and the environment, and analyse the relative costs and benefits of strategies for reducing emissions and vulnerability to climate change.

40. Five intergovernmental organizations[14] reported activities related to capacity-building for adaptation to climate change. There are six activities in Asia, three in Africa, and four in Latin America and the Caribbean. Most of the activities involve country studies, national workshops, and certificate programmes. WMO has a programme with UNU and UNEP to "train the trainers" on adaptation and establishing national climate affairs programmes in developing countries. Other organizations develop methodologies for resource valuations (e.g. contingent valuation) and improve economic approaches for assessing various climate change adaptation options.

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[14] FAO, OAS, UNEP, UNITAR and WMO.

41. Examples of the reported activities for climate change adaptation are:

- Publication of a handbook on adaptation methods;
- Studies on opportunities to exploit economies of scale through regional collaboration in cases where countries can utilize similar adaptation measures;
- Development of early warning and preparedness systems in developing countries against anomalous climate and climate-related extremes (floods, droughts, frosts, fires and disease);
- Adaptation of farmers' practices to adverse conditions, in order to help stabilize and possibly increase agricultural production under variable environmental conditions;
- Conducting of training workshops on vulnerability and adaptation assessment;
- Support for adopting environmentally-sound practices of land husbandry;
- Preparation of national climate change adaptation policies, and coastal vulnerability and risk assessment reports;
- Support for preparation of strategies for disaster prevention;
- Support for national coastal vulnerability and risk assessment.

G. Public awareness

42. Twelve Annex II Parties[15] reported activities and programmes related to capacity-building in the area of public awareness. Generally, these activities and programmes involve workshops, national, regional and international symposia, and the production of manuals, brochures, bulletins, case studies, videos and cyber libraries.

43. Examples of the reported activities and programmes for public awareness are:

- Support for workshops on climate change and sea level rise aimed at policy makers to increase awareness of climate change in the Pacific;
- Enhancement of public participation by building networks, compiling information, and identifying good practices;

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[15] AUS, AUT, CAN, EU, FIN, FRA, ITA, JPN, NLD, NOR, SWE and the USA.

- Promotion of climate change mitigation action through information exchange among countries and regions and allowing public access to scientific and technological information through the Asia Pacific Network on Climate Change (APNET) web site;

- Compilation and dissemination of basic land resource information to aid in the assessment and monitoring of desertification and impacts of climate change;

- Provision of training in environmental education;

- Support for regional workshops to increase knowledge of the need for technology transfer, demonstration projects on energy efficiency technologies and services, technology awareness activities, and a forum on regional energy business development.

44. Ten intergovernmental organizations[16] reported capacity-building activities for public awareness in climate change. There are 10 activities in Asia, 10 in Africa, and nine in Latin America and the Caribbean. In addition, there are global activities that focus on the forestry and agricultural sectors, policy and best practices for energy, and general climate change awareness. Several of the activities are implemented through training workshops, research, country studies, and data collection. Many activities aim to increase access to information in developing countries to foster expert networks, particularly through the Internet. Some activities increase awareness of the economic benefits of climate change policies and prevention measures.

45. Examples of the reported activities for public awareness are:

- Support for economic analysis of climate change mitigation strategies and investment options;

- Training to increase awareness of legal frameworks and coordination between the private sector, non-governmental organizations, government and other stakeholders for information exchange;

- Support for partnerships to improve project preparation;

- Conducting of workshops to promote understanding of climate change financial mechanisms specific to energy efficiency and climate change studies;

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[16] DESA, FAO, OAS, UNCTAD, UNDP, UNEP, UNITAR, UNU, WMO and the World Bank.

- Provision of information systems, especially utilizing the Internet, which allow stakeholders to collect data and learn about training, funding, and other relevant climate change issues;

- Conducting of regional workshops on conservation and agriculture to increase awareness of policy and decision makers;

- Conducting of workshops to identify CDM projects and present findings to the general public.

H. Coordination and cooperation

46. Seven Annex II Parties[15] reported activities and programmes which facilitate capacity-building for coordination and cooperation. In general, the activities aim to strengthen the links within developing countries and between developing countries and developed countries, through joint programmes, sharing of experience and information, and cyber forums.

47. Examples of the reported activities and programmes for coordination and cooperation are:

- Promotion of an internet-based information resource and discussion platform on energy efficiency and renewable energy technologies;

- Exchange of information exchange to promote climate change mitigation among countries and regions;

- Support for local environmental desks, information networks, and mechanisms for sharing experience;

- Support for joint efforts in economic modelling and environmental policy;

- Establishment of a centre to facilitate technical cooperation with China to disseminate information on energy and environmental technology related to electric power;

- Exchange of information and implementation of demonstration projects and research on energy and environmental technologies for clean coal, oil, and gas;

- Facilitation of networking between United States and Chinese company representatives, and development of a strategy for fostering United States/Chinese joint ventures to promote renewable energy electrification in China.

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[15] AUS, AUT, DEU, EU, ITA, NOR and the USA.

48. Six intergovernmental organizations[16] reported capacity-building activities for cooperation and coordination in climate change. There are 11 activities in Asia, 9 in Africa, 10 in Latin America and the Caribbean and one global activity. The reported activities involve training workshops, certificate programmes, research, countries studies, data collection, transferring meteorological technologies, and technical support missions. They also enhance regional networking to facilitate information exchange, policy dialogue, and the establishment of regional collaboration.

49. Examples of the reported activities for cooperation and coordination are:

- Conducting of regional workshops in the Pacific region and the coordination of activities in the Middle East;
- Enhancement of the Caribbean network of sea-level gauges and meteorological sensors;
- Conducting of workshops to increase the awareness of African countries of the possible benefits of CDM projects;
- Provision of technical assistance for forecasting and national meteorological monitoring systems in Burkina Faso, Mali and Niger;
- Assessment of information needs of developing countries and technical capacities, particularly on their access to the Internet;
- Implementation of feasibility studies in the Caribbean and improvement of forecasting systems for severe weather events such as El Niño;
- Creation of a global conceptual framework for the CDM, including two prototype spreadsheets representing the possible configurations of industrial sector CDM projects.

I. Improved decision-making

50. Six Annex II Parties[17] have reported activities and programmes that facilitate capacity-building for improved decision-making. The programmes commonly involve workshops, courses for policy makers and key stakeholders on climate change issues, consultative meetings on climate change, data gathering, and dissemination of information.

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[16] DESA, ESCAP, OAS, UNIDO, UNITAR and WMO.

[17] AUS, DNK, EU, NOR, SWE and the USA.

51. Examples of the reported activities and programmes for improved decision-making are:

- Assistance to national governments in exploring the opportunities and benefits of participating in the CDM;
- Strengthening of capacity of the relevant authorities to manage the CDM in their countries and to better understand the issues and opportunities presented by international markets;
- Collection of data and identification of key markets and institutional barriers to energy efficiency in China;
- Assistance to governments in planning and implementing measures to adapt to the impacts of climate change, develop climate strategies, and identify and implement environmental projects.

52. Ten intergovernmental organizations[18] reported capacity-building activities for improved decision-making in climate change. There are 17 activities in Asia, 15 in Africa, 17 in Latin America and the Caribbean, and five global activities. The reported activities involve research, training workshops, certificate programmes, consensus-building activities, data collection, and enhanced information systems. Some of the projects produce technical documents that analyse the effects of climate change in various sectors. Most of the activities aim at improving the access of information of policy makers and/or improve the quality of information so that decisions can be based on sound environmental and social research.

53. Examples of the reported activities and programmes for improved decision-making are:

- Production of publications and implementation of pilot projects on sustainable energy and climate change mitigation;
- Publication of *Sustainable Energy Strategies: Materials for Decision-Makers*;
- Conducting of workshops for consensus building and enhancing the negotiation capacities of the Group of 77and China;
- Conducting of workshops to review the policy dimensions of the UNFCCC and on policy development for the energy sector in sustainable economic development;
- Implementation of pilot projects to improve the meteorological applications in southern Africa;

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[18] ADB, ESCAP, FAO, OAS, UNDP, UNEP, UNIDO, UNITAR, WMO and the World Bank.

- Provision of training centres, such as a drought monitoring centre in southern Africa;

- Conducting of workshops for negotiators, experts and ministers and financial advisors on financial issues.

V. OBSERVATIONS AND CONCLUSION

54. The following observations may be useful to Parties in considering the information presented above:

(a) Most intergovernmental organizations reported that the financial support for their activities comes from Annex II Parties and the GEF;

(b) Many Annex II Parties indicated their contribution to the GEF as constituting a significant part of their efforts aimed at capacity-building in the area of climate change:

(c) Many of the activities and programmes reported by Annex II Parties were aimed at building the capacity of developing countries to mitigate climate change either through GHG emission reductions or through removals by sinks;

(d) Most of the activities and programmes reported by Annex II Parties included capacity-building as only one of many objectives.

55. Based on the information provided, it appears that there are activities and programmes carried out and/or supported by Annex II Parties and intergovernmental organizations which respond to the capacity-building needs of non-Annex I Parties as indicated in the annex to decision 10/CP.5. However, because the information provided does not indicate consistently the scope, magnitude, target beneficiaries, results, outputs, and other parameters of the reported activities and programmes, it is not possible in this note to indicate the extent to which the reported activities and programmes have met the capacity-building needs listed in annex to decision 10/CP.5.

56. At its fifth session, the COP decided that "existing capacity-building activities and programmes should be comprehensively assessed to determine their effectiveness and to gaps and weaknesses in ongoing efforts, and that the special needs of developing countries should be further elaborated in accordance with this decision, through a contry-driven process, so as to take a comprehensive decision at its sixth session" (decision 10/CP.5, para. 1 (c)). Parties may wish to provide further guidance on how other information sources may be presented to strengthen the decision-making process envisaged in decision 10/CP.5.

Annex I:
LIST OF INFORMATION COMPILED

A. List of Annex II Parties whose national communications were reviewed for this compilation and synthesis

1. Australia (AUS)
2. Austria (AUT)
3. Belgium (BEL)
4. Canada (CAN)
5. Denmark (DNK)
6. European Union (EU)
7. Finland (FIN)
8. France(FRA)
9. Germany (DEU)
10. Greece (GRC)
11. Iceland (ISL)
12. Ireland (IRL)
13. Italy (ITA)
14. Japan (JPN)
15. Netherlands (NLD)
16. New Zealand (NZL)
17. Norway (NOR)
18. Portugal (PRT)
19. Spain (ESP)
20. Sweden (SWE)
21. Switzerland (CHE)
22. United Kingdom of Great Britain and Northern Ireland (GBR)
23. United States of America (USA)

Note:
Luxembourg and Turkey did not submit their second national communications as at 30 April 2000.

B. List of Annex II Parties which submitted information in document FCCC/SB/2000/INF.8 to supplement information contained in their national communications

1. Australia
2. Canada
3. Japan
4. New Zealand
5. Norway
6. Portugal on behalf of the European Community and its member States
7. United States of America

C. List of intergovernmental organizations which submitted information on their ongoing capacity-building activities in document FCCC/SB/2000/INF.9

1. Asian Development Bank (ADB)
2. Department of Economic and Social Affairs (DESA)
3. Economic and Social Commission for Asia and the Pacific (ESCAP)
4. Food and Agriculture Organization of the United Nations (FAO)
5. Organization of American States (OAS)
6. United Nations Conference on Trade and Development (UNCTAD)

7. United Nations Development Programme (UNDP)
8. United Nations Environment Programme (UNEP)
9. United Nations Educational, Scientific and Cultural Organization (UNESCO)
10. United Nations Industrial Development Organization (UNIDO)
11. United Nations Institute for Training and Research (UNITAR)
12. United Nations University (UNU)
13. World Health Organization (WHO)
14. World Meteorological Organization (WMO)
15. World Bank

Annex II
SUMMARY TABLES OF COMPILED INFORMATION

Table 1: Summary of information on activities and programmes of Annex II Parties

	Institutional capacity-building	Capacity-building under the CDM	Human resources development	Technology transfer	National communications	Adaptation	Public awareness	Coordination and cooperation	Improved decision-making
AUS	X	X	X	X	X	X	X	X	X
AUT				X			X	X	
CAN				X			X		
DEU	X		X					X	
DNK	X		X						X
EU	X	X	X	X	X		X	X	X
FIN			X			X	X		
FRA							X		
ISL						X			
ITA	X		X			X	X	X	
JPN	X		X			X	X		
NLD	X		X	X	X		X		
NOR	X	X	X				X	X	X
NZL	X		X		X	X			
PRT	X		X						
SWE	X		X				X		X
USA	X	X	X	X	X	X	X	X	X

Note:
Six Annex II Parties (BEL, GBR, GRC, IRL, CHE and ESP) did not provide information on specific capacity-building activities or programmes, and therefore are not included in the table.

Table 2: Summary of information on activities of intergovernmental organizations

	Institutional capacity-building	Capacity-building under the CDM	Human resources development	Technology transfer	National communi-cations	Adaptation	Public awareness	Coordination and cooperation	Improved decision-making
Activities in Africa	UNEP	UNEP, UNIDO	DESA, UNEP, UNIDO, WMO	DESA, UNIDO			DESA, UNEP	UNIDO, WMO	UNEP, UNIDO, WMO
Activities in Asia and the Pacific	DESA, FAO, UNITAR	ADB, FAO, UNDP	ADB, DESA, FAO, UNITAR, UNU, WHO, WMO	ADB, DESA, FAO, UNITAR, WHO	ADB, ESCAP, FAO, UNITAR	FAO, UNITAR	FAO, UNCTAD, UNITAR, UNU	DESA, ESCAP, UNITAR	ADB, ESCAP, FAO, UNITAR
Activities in Latin America and the Caribbean	OAS, WMO	OAS, UNDP	OAS, UNDP, UNU	DESA, OAS, UNDP, WMO	OAS	OAS	OAS, UNU, WMO	DESA, OAS, WMO	OAS, UNDP, WMO
Activities which are global	UNDP, UNEP, UNITAR, WMO	UNIDO, World Bank	DESA, UNDP, UNEP, UNESCO, UNITAR, UNU, World Bank, WHO, WMO	DESA, UNITAR, UNU, World Bank	UNEP, UNITAR WHO	UNEP, UNITAR, WMO	FAO, UNDP, UNEP, UNITAR, UNU, World Bank, WMO	UNIDO, UNITAR	FAO, UNDP, UNEP, UNIDO, UNITAR, World Bank

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